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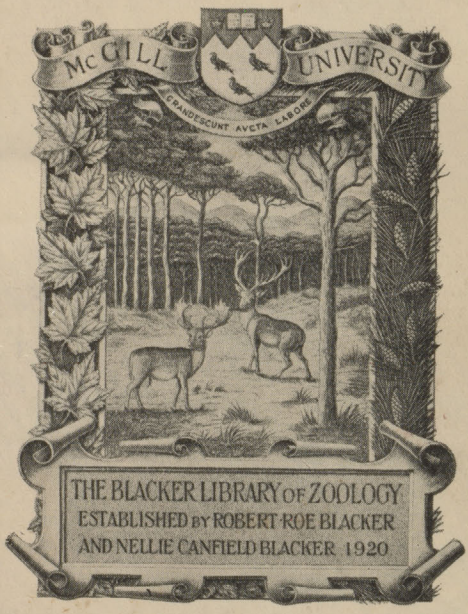
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FIRST

ANNUAL REPORT

OF THE

Society

FOR THE

ACCLIMATISATION OF ANIMALS,

BIRDS, FISHES, INSECTS AND VEGETABLES

WITHIN THE UNITED KINGDOM.

1861.

TEMPORARY OFFICES—346, STRAND, LONDON. W.C.

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THE ACCLIMATISATION SOCIETY may now be fairly said to be at work. It has completed the first year of its existence; ever the most critical one, with societies as with individuals. Its promoters have gone the right way to work by not attempting too much until the ground for action had been prepared by a strong and perfect organisation. That organisation is now secured. It has an active working committee in London, and already are secured correspondents and agents in every quarter of the globe. Under the active superintendence of Mr. Wilson, a branch of the society has been started at Melbourne, Australia, from which the most valuable co-operation may be expected; and a branch society has also been established at Glasgow by some of the most influential men in the West of Scotland. Even during the past year (when the society might have been excused had it confined itself to preliminary arrangements) much has been done. Quails have been obtained from Canada, and are now thriving under the care of members; specimens of the *Dioscorea Batatas*, or Chinese Yam, are already in cultivation; some most valuable varieties of beans and peas (obtained, through the kindness of Mr. Consul Petherick, from the North-East of Africa) are being cultivated; and a pair of diminutive Brittany sheep have been presented for experiment by the Society to Miss Burdett Coutts, as an acknowledgment of her liberal aid to the Society in its infancy. This next year will, no doubt, see much more accomplished. A large part of the funds in hand are already spent in anticipation. The secretary has been ordered to purchase a flock of the very useful and curious Chinese sheep for propagation and distribution; also to plant at the expense of the Society an acre of land with the Chinese Yam; also to send an agent to Prussia, at the expense of the Society, to bring over a stock of the Sander, a very valuable pond fish, recommended by Mr. Wilson; and, finally, the Society has offered a premium to whoever will deliver in England living specimens of the Murray cod—a fresh-water Australian pond-fish of which Mr. Wilson gives a very high character. From these proofs of energetic action we draw an inference which cannot be otherwise than satisfactory to the great body of the subscribers; namely, that it is the intention of the Society to make utility the principal object in view. The cultivation of birds of game may be a very pleasant diversion in its way, and may be very fitly undertaken by the members as ornamental addition to their more serious labours; but if the Society is to command the general respect and support of the public it must be by importations calculated to increase and agreeably vary the natural products of the country, and above all the food of the people.—(*From the* FIELD *of* 11*th May*, 1861.)

SOCIETY FOR THE ACCLIMATISATION

OF

Animals, Birds, Fishes, Insects, and Vegetables

WITHIN THE UNITED KINGDOM.

PATRONS.

The Duke of Newcastle
The Duke of Rutland
The Duke of Sutherland
The Marquis of Breadalbane
The Marquis of Conyngham
The Marquis of Clanricarde
The Earl of Albemarle
The Earl of Tankerville
The Earl of Malmesbury
The Earl of Craven
The Earl of Pomfret
The Viscount Bury
The Viscount Uffington
The Viscount Somerton
Lord Tredegar
The Viscount Powerscourt
The Earl Spencer
Viscount Hill
Viscount Newport
Viscount Southampton
The Earl of Mountcharles
The Earl of Lichfield
Miss Burdett Coutts
Sir Roderick I. Murchison, Museum of Economic Geology, Jermyn-street
The Hon. Grantley F. Berkeley, Winkton House, Ringwood, Hants
Sir George Wombwell, Newburgh Park, Easingwold, Yorkshire
Professor Owen, British Museum
Sir Culling Eardley Eardley, Bidwell Park, Hatfield, Herts
Hugh Childers, Esq., 57, Eaton-square
J. Gould, Esq., Zoological Society
Andrew Drummond, Esq., Cadland, Southampton
— Chamberlayne, Esq., Southampton
T. Pilkington Dawson, Esq., Groton House, Suffolk
William Knapp, Esq., The Hill, Walnerley
Henry Townsend, Esq., Castle Townsend, Ireland
Thomas Blackwell, Esq., Montreal, Canada
Professor Quekett, Royal Coll. of Surgeons
Mr. Chief Justice Temple, 46, Elgin-crescent, Notting-hill
President of the Royal College of Surgeons
Col. Howard Vyse, Old Windsor
Dr. Günther, British Museum

COUNCIL.

The Marquis of Breadalbane
The Viscount Powerscourt
The Hon. Grantley F. Berkeley
Higford Burr, Esq., Aldermaston, Reading
J. Crockford, Esq., 346, Strand. W.C.
B. Waterhouse Hawkins, Esq., Belvedere-road, Upper Norwood. S.
James Lowe, Esq., 15, Duke-street, Adelphi
J. H. Walsh, Esq., 22, Kensington-square. S.W.
W. B. Tegetmeier, Esq., Apiarian Society, Muswell Hill
L. MacKinnon, Esq., Bittersea House, Mill Hill, Hendon
Capt. S. Dawson Damer, M.P., 2, Chapel-street, Grosvenor-square
E. W. Nix, Esq., 77, Lombard-street
C. S. Townshend, Esq., Fellow of Jesus College, Cambridge

President—THE MARQUIS OF BREADALBANE.

Vice-President—THE HON. GRANTLEY F. BERKELEY.

Bankers—Messrs. COUTTS & CO., Strand.

Secretary—F. T. BUCKLAND, Esq., M.A. (2nd Life Guards.)

Treasurer—J. BUSH, Esq.

TEMPORARY OFFICES—346, STRAND, LONDON. W.C.

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PROSPECTUS.

The purposes of the Society are—

1. The introduction, acclimatisation, and domestication of all innoxious animals, birds, fishes, insects, and vegetables, whether useful or ornamental.

2. The perfection, propagation, and hybridisation of races newly introduced or already domesticated.

3. The spread of indigenous animals, &c., from parts of the United Kingdom where they are already known, to other localities where they are not known.

4. The procuration, whether by purchase, gift, or exchange, of animals, &c., from British Colonies and foreign countries.

5. The transmission of animals, &c., from England to her Colonies and foreign parts, in exchange for others sent thence to the Society.

6. The holding of periodical meetings, and the publication of reports and transactions for the purpose of spreading knowledge of acclimatisation, and inquiry into the causes of success or failure.

The Society will begin with small and carefully conducted experiments.

It is proposed that those members who happen to have facilities on their estates for experiments, and who are willing to aid the objects of the Society, should undertake the charge of such subjects for experiment as may be offered to them by the Society, periodically reporting progress to the Council.

It will be the endeavour of the Society to attempt to acclimatise and cultivate those animals, birds, &c., which will be useful and suitable to the park, the moorland, the plain, the woodland, the farm, the poultry-yard, as well as those which will increase the resources of our sea shores, rivers, ponds, and gardens.

It is hoped that this endeavour to increase the internal resources of the country will meet with the support of the public.

Persons desirous of becoming Members may do so on subscribing 2*l.* 2*s.* per annum. A donation of 10*l.* will make the donor a life-member of the Society.

Remittances may be made by Post-office Order or Cheque, addressed to JOHN BUSH, Esq., Treasurer, 346, Strand, London. W.C.

FIRST ANNUAL REPORT

OF THE

ACCLIMATISATION SOCIETY,

MARCH 26, 1861.

GENTLEMEN,

IT is our duty as your Council, at this the First Annual Meeting, to give a Report of the past proceedings, present condition, and future prospects of the Society.

As you are aware, the suggestion for forming this Society originated with the Proprietors of THE FIELD, in consequence of which the first Meeting of Noblemen and Gentlemen to form the Society was held on June 26, 1860. Those Gentlemen present were anxious to collect into one focus and cause to bear upon the public benefit the numerous scattered efforts of many Noblemen, Landed Proprietors, Agriculturists, and others who had already made attempts, and were willing to make further efforts, to enlarge the supplies of animal and vegetable food, as well as of useful living objects in this our favoured country, and for this purpose they were anxious to receive all information, and commence practical trials, with such foreign products of nature, whether animal or vegetable, as should promise good general results.

At the first Meeting, Officers of the Society were chosen, as well as a Council and Managing Committee.

At the next Meeting we were favoured with the presence of Mr. Edward Wilson, whose great success in acclimatising Animals, Birds, &c.,* among our relations and friends in the magnificent

* The following list shows that the efforts to acclimatise in Australia have been crowned with success, and I am enabled to give a list of animals which have been imported into that country in sufficient quantity to establish their race permanently, unless there should prove to be some insuperable difficulty in the way of such establishment:—The Sheep, Alpaca, Angora Goat, Camel, Red Deer, Fallow Deer, Spotted Axis, Pea Fowl, Common Pheasant, Partridge, Swan, Carp, Gold Fish, Thrush, Blackbird, Starling, Linnet, Goldfinch, Java Sparrow, Squirrel, Glow-worm. In a few years many of these animals and birds will become of great importance to Australia—the Alpaca alone has already opened up a new field of industry, which in a few years will most materially increase the actual wealth of the country.

Colony of Australia is now an established fact, worthy of the highest consideration and public gratitude. We were also honoured with the observations of Dr. Bennett, the eminent Naturalist, from Sydney, and of Mr. Fitzgerald, from New Zealand, who expressed their willingness to co-operate with the Society.

At subsequent Meetings were assembled Travellers, Sportsmen, Landed Proprietors, and Scientific Men, earnest in the cause, and willing to assist the efforts of the Society by advice, correspondence, and personal charge of specimens. The Rules of the Society were then drawn up, and a Circular (with both of which documents you are sufficiently familiar) widely distributed. In this Circular the objects and the wishes of the Society were expressed publicly and openly.

The consequence of this Circular, as well as of the private efforts of the Vice-President, the Secretary, and other Members of the Society, was to obtain support of Noblemen and Gentlemen who were anxious to countenance the Society, either by their patronage or by becoming actual working Members. This list is now before you : (see Appendix B.)

You will see from this list that we have among us representatives of all classes of society, thus forming a nucleus which cannot fail in time to grow and develop itself into a most important and useful National Society, founded for the public advantage and benefit.

We should in this place mention that we are anxious to work in friendship and amity with the Zoological Society of London, and that we have every hope of obtaining their support and co-operation ; and *vice versâ*.

In order to give an actual start and impetus to this young Society, the sinews of war were wanting—the infant had no perambulator—it could cry and make known its wants, but could not stir from its cradle. A lady, whose name will for future generations be remembered as one of the greatest benefactors of all good and useful works in this country, Miss Burdett Coutts, came to our aid, and, by the handsome gift of £500, with a yearly subscription of £10 10*s*., infused life and animation into the veins of our young and struggling Society.

Since that period we have received subscriptions from many quarters, and the Treasurer's Balance Sheet is now presented : (Appendix D.)

Gentlemen,—It will be asked, what has the Society actually done ? You will perceive that one of our principal objects is "to spread knowledge of Acclimatisation;" and when we tell you, on the authority of one of our greatest Naturalists, M. G. St. Hilaire, that there are about 140,000 species of animals, out of which we make use of forty-three only, we may well pause before we feel justified in spending the funds of the subscribers upon objects which after all may turn out useless failures.

We have as yet limited our efforts (and you must recollect that we are only an infant of nine months of age, and that we must crawl before we can walk) to collecting the pabulum for our future operations, for without practical information we cannot commence on a large scale. It therefore became necessary to ascertain what animals, &c., were most likely to suit this country, and to become useful.

In the autumn of last year your Secretary, wishing to forward the objects of the Society, undertook to read a paper on the subject, before the Zoological section of the British Association then assembled at Oxford; he also, in November of last year, at the request of the Council of the Society of Arts delivered a Lecture, in their Lecture Hall at John-street, Adelphi, on the subject of Acclimatisation. In this Lecture he determined to examine, by means of the experiences of the Zoological Gardens, as well as of private gentlemen, the list of Animals, Birds, &c., which the test of having already lived and bred in this country would show that further efforts should be made in actually acclimatising them.*

In order to impress his remarks upon the audience, he obtained actual specimens of the skins, and horns, as well as drawings, of various Animals, also skins of birds that would do well in this country, kindly lent him by various gentlemen and naturalists. He also exhibited drawings of useful fish, and also pointed out the facility of the details of the much-neglected art of Pisciculture. He was careful to select those specimens of Animals, &c., only, that had been proved to breed, and accepted none which the test of practical experience did not point out as advisable for first experiments.

The result of this Lecture was highly satisfactory. Professor Owen, as chairman, gave his valuable countenance, and good wishes to our efforts; and many useful remarks and hints were given verbally at the time of the Lecture by gentlemen of known practical experience, as well as of scientific men, who brought their knowledge to bear on the subject. The subject evidently was received with public approval, for in many subsequent numbers of the "Proceedings of the Society of Arts," we find gentlemen kindly lending their aid by advice and valuable suggestions.

In actual consequence of this Lecture (as we are informed by Mr. G. Ledger), the subject of acclimatisation was again brought forward, when this gentleman delivered a Lecture on February 22nd, 1861, on the "Acclimatisation of the Alpaca in Australia," an accomplished fact, for which the inhabitants of the country cannot be sufficiently grateful to Mr. Charles Ledger, brother of the Lecturer.

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* This Lecture will be republished, by permission of the Society of Arts.

Other items of valuable information and results of practical experiences, have, since the Society has become more gradually known, been offered to our notice. We should specially here mention the great liberality of the Proprietors of THE FIELD, who have not only kindly placed much of their valuable space at our disposal, but have also encouraged the remarks of their various correspondents upon our objects, and from this source we have, in many instances, thoroughly ventilated disputed points and doubtful facts. The Society are also much indebted to the proprietors of THE FIELD for allowing them to have their temporary offices, and to hold their meetings under their roof, free of charge.

But apart from information relative to Acclimatisation which has been publicly printed and circulated, we have received from all parts of the world letters and newspapers from Members, and from non-Members, embodying not only useful hints, but also offers of practical assistance. Of these documents a classified list is given, showing the offers of direct assistance, and also of co-operation : (Appendix A.)

As regards the correspondence which we have received, we mention among the most important that the President of the Société d' Acclimatation in Paris has voluntarily written, offering the heartiest co-operation and support. This Society is under the immediate Patronage of the Emperor, and of the French Government, which has given a Grant of Money and of Land in the Bois de Boulogne.

An important relationship has also been thoroughly established with nearer neighbours. In August last a deputation of the Society held a public meeting at Glasgow, the Lord Provost of Glasgow in the chair, and a Branch Society has been formed in that city : (Appendix C.)

A Lecture on behalf of the objects of the Society was shortly afterwards delivered in Glasgow, by your Vice-President.

Though we are yet so young and inexperienced in practical details of Acclimatisation, yet we have not been altogether idle. Something has really been done.

First, through the instrumentality of your Vice-President, during the last month, Birds which that gentleman had seen alive in their native homes, and which he considers would do well in this country, have been received from Mr. Cunard in England. In April, sixteen live Quail from Canada, were received through Mr. Cunard, and have been placed under the care of one of our patrons, Lord Malmesbury, at Heron Court.

Secondly, again in March last your Vice-President received eight prairie grouse from America ; we regret to state that two only of these arrived alive, but we have learnt a lesson as regards the future transport of other specimens.

Thirdly, a pair of diminutive sheep from Brittany, a portion of a flock which were exhibited at the Crystal Palace, have been purchased by the Society, and presented to Miss Burdett Coutts, under whose care they are doing well.

Fourthly, at the instance of your Secretary, other specimens of these same Sheep have been purchased by Col. H. Vyse, 2nd Life Guards, and this gentleman has reported favourably of their progress to the Society.

Fifthly, through the instrumentality of F. J. Stevenson, Esq., of the Grand Trunk Railway, Montreal, Canada, nine specimens of Canadian Quail were received alive and well, and are now under the care of one of our Members, who has good accommodation for their reception.

Sixthly, your Secretary has enlisted the co-operation of the Thames Angling Preservation Society as regards pisciculture. At a meeting of that association, held a few days ago, the subject was thoroughly ventilated, and they have determined to establish a Fish Hatching Apparatus at Sunbury, on the premises of — Hedges, Esq., who has kindly offered the uses of the stream which flows through his fields. To enable this to be carried out, members of the Society have already made a liberal subscription. Your Secretary has undertaken the practical working of the experiment.

The Thames Angling Preservation Society have also, at the suggestion of your Secretary, consented to superintend the turning out of young salmon within their preserved waters, and Mr. Higford Burr has kindly promised to supply the live fish.

Seventhly, specimens of the Chinese Yam, the Dioscorea Batatas, and of the West Indian Sweet Potatoe, have been consigned to the care of one of our Members, with a view to their being cultivated, if not out of doors, yet in our hothouses. We hope in a few days to receive from Paris a further supply of these Yams from the Société d'Acclimatation. These plants have been partially acclimatised by several years growth in France, and will shortly be received.

Eighthly, specimens of seeds of an edible bean, presented to the Society by the Hon. Chief Justice Temple, of British Honduras, have been consigned to Mrs. Leigh Sotheby, and other members.

Ninthly, the following specimens of seeds from the White Nile have been presented by Mr. J. Petherick, H.M. Consul at Khartum, Central Africa, and have been distributed among Members who have accommodation for them—

1. Elephant Beans.
2. Red Beans. The pods grow to one foot in length, and contain from six to eight beans, which are excellent eating. The Djour plant them around their fences, which they cover.

3. Beans from the Mandar tribe, triennial, produce all the year round, and are *excellent food.*
4. Beans and Peas of excellent qualities.
5. Beans. Beautiful foliage and good food.

Tenthly, much correspondence as regards the transport and acclimatisation of a new fish, the *Lucio Perca* has taken place. After diligent inquiry (showing necessity of caution in first operations), your Secretary and your Managing Committee have determined *not* to import this fish as yet, as it would appear to be too voracious in its habits and might prove detrimental to our waters—this subject is therefore deferred for the present.

We have now before us three objects—

Firstly, introduction of a New Animal.—The most desirable of these appears to be a small species of Sheep. There are small Sheep to be obtained at Aden ; in India (the *Purik*) ; and from China ; of the latter of which we have received the highest character. Several Members have expressed great longing for importations of the Eland ; these beasts have already been acclimatised by three of our Patrons, the Earl of Breadalbane, Lord Hill, and by one of our Members, Lord Powerscourt. The nephews of our worthy Treasurer, however, are now residing in Africa, and he has promised to assist the Society by putting himself in communication with them as regards this point.

Secondly, we have in view the introduction of a New Bird. You have already seen that Quails and Grouse have actually arrived. We have a promise of Eggs and Young Birds of the various North American Grouse species from Captain Hardy, now resident at Nova Scotia, which will be sent over in the spring. We have also promises of Guans and Curassows, as farm-yard birds, from the Hon. Chief Justice Temple, of British Honduras.

We have also promises of various kinds of Indian Game Fowl from a gentleman (R. M. Brereton, Esq.) living in the jungles of Central India. We have the promise of one of our Council, Captain S. D. Damer, M.P., to procure Grouse from Norway : (see also Appendix C.)

Thirdly, we want a good new Pond Fish. Your Secretary has been enabled to enlist the co-operation of Dr. Günther of the British Museum, a gentleman whose extensive knowledge of fish has obtained for him a European fame as an Icthyologist ; this gentlemen has given his verdict against *Lucio Perca*, and this shows the value of not being in a hurry, in choosing objects for Acclimatisation; but he has, instead, highly recommended two fish, viz., the *Silurus Glanis*, which he has himself brought alive to England, and also the *Guaramier*, *Osphrohemus Olfax*, which is pronounced to be the very best fresh water fish in the world ; this fish is a native of Jamaica, but has been taken alive to the Mauritius.

Lastly, Gentlemen, your Secretary has taken steps to bring before His Grace the Duke of Newcastle the objects of the Society, and hopes, in a few days to report that communications are opened with the Society and the Governors of the various Colonies, through the Foreign Office. Captain S. Dawson Damer, M.P., has had an interview with His Grace, who stated that he would willingly afford any assistance in his power, and that he would write to the Governors of the Colonies who were likely to assist us (and these were sixty in number), and send our papers.

FRANCIS T. BUCKLAND, M.A.,

2nd Life Guards,

Secretary to the Society.

APPENDIX A.

SPECIFIC OFFERS OF ASSISTANCE

TO THE

ACCLIMATISATION SOCIETY.

1. M. G. St. HILAIRE, President of the French Imperial Acclimatisation Society—Offers to establish friendly communications and interchange of objects, and to send specimens of Chinese Yam.

2. Mr. Chief Justice TEMPLE, British Honduras—Will procure Curassows Guans, and farm yard birds; also Seeds of edible Vegetables from Honduras.

3. R. M. BRERETON, Esq., Civil Engineer, G.T.P., Nassich, Bombay, India —Will procure Indian Deer, &c., also living Indian Birds.

4. SAMUEL H. BICIDOR, Esq., Melbourne, Australia—Will send Painted Quail and other Australian birds. Recommends the "Murray Cod."

5. Captain HARDY, Royal Artillery, Halifax, Nova Scotia — Promises living Grouse (Tree and Prairie); also Quail from Nova Scotia. Eggs of these birds also will be sent in the spring.

6. F. J. STEVENSON, Esq., Grand Trunk Railway, Montreal, Canada—Game Birds of Canada (Ten Quail already received). Seeds of useful vegetables.

7. T. A. AUSTIN, Stratford, Connecticut, America—Will send Prairie Grouse and Quail, and Ruffled Grouse, if possible.

8. E. CUNARD, Esq., New York, America—Promises Grouse and Quail. Specimens have been received, March and April, 1861.

9. J. MAXTONE, Esq., Perth, Scotland—Will send Pearl-bearing Muscles from the Tay.

10. Captain T. R. THOMSON, Woodville Lodge, Red Hill—Intelligence relative to importation of South African Animals.

11. CHARLES PENRUDDOCKE, Esq., 5, Oxford-row, Bath — Will try any kind of Fish, either pond or river, on his estate.

12. S. GURNEY, Esq., Carshalton—Offers to take charge of Birds.

13. H. C. DEAR, Esq., Milbrook, Southampton—Offers to unship, take charge of, and transmit to destination any Animal or Bird arriving at Southampton.

14. E. W. NIX, Esq., 77, Lombard-street—Has written for Guans.

15. THOMAS GARNETT, Esq., Clitheroe—Will interest himself with Peninsular and Oriental Company, through one of their captains in command between Alexandria and Liverpool. Information relative to Hybrid fish.

16. Viscount POWERSCOURT—Will bring home Jungle Fowl and Seeds of useful Plants from Mysore, India.

17. TATTON SYKES, Jun., Esq., Malton, Yorkshire—Will take charge of Game Birds. (Has received ten Quail already.)

18 Sir GEORGE WOMBWELL, Newburgh, Easingwold, Yorkshire—Will take charge of Animals or Birds.

19. Miss BURDETT COUTTS—Accepts charge of Diminutive Sheep from Brittany, and also of Seeds.
20. W. E. MORLAND, Esq., The Court Lodge, Lamberhurst—Will undertake management of any Animals—suggests Chinese sheep.
21. Dr. GÜNTHER, British Museum—Will assist in transport of Silurus Glanis from South Europe.
22. Captain S. D. DAMER, M.P.—Will procure Grouse from Norway.
23. The Earl of POMFRET—Will take charge of Birds, Seeds, and Plants.
24. Mrs. LEIGH SOTHEBY—Will take charge of Seeds, and Chinese Sheep.
25. Sir JOHN ORDE—Will take charge of Indian Cattle, &c.
26. W. B. TEGETMEIER, Esq., Secretary of Apiarian Society—Will take charge of any new species of Bees, and is particularly anxious for stingless bees from Demerara, &c.
27. W. MALCOMB, Esq., of Glenmory—Will take charge of Game Birds.
28. W. J. DAVIDSON, Esq., Glasgow—Will procure Animals from Mogadore.
29. HIGFORD BURR, Esq., Aldermaston, Reading—Will take charge of Birds.
30. E. S. BLYTH, Esq., Asiatic Society, Calcutta—Will send Animals, Birds, &c., from India.
31. WILLIAM THOMPSON, Esq., Weymouth—Reports successful Experiments in transport of Crawfish, Samphire, &c.
32. W. BLACKBURROW, Esq., Weston-super-Mare, Somersetshire (who is about to proceed to Natal, South Africa)—Will procure and send such Animals, Birds, Plants, and Seeds, as would be likely to do well in this country.

Offers of assistance and co-operation have also been received from the following Gentlemen:—

SMITH CHILD, Esq., 1, Torwood Mount, Torquay.
THOMAS GARNETT, Esq., Clitheroe, Blackburn.
SIR WALTER TREVELYAN, Seaton, Axminster, Devon.
DR. GARDNER, 23, Montague-street, Russell-square, W.C.
LEONARD WRAY, Esq., Park-crescent, Clapham.
REV. R. SWINFORD MILLS, Halsett Vicarage, Taunton.
THE PROPRIETORS OF "THE FIELD," 346, Strand, W.C.
THE COUNCIL OF THE SOCIETY OF ARTS, John-street, Adelphi.
L. M. WOOLF, Esq., 19, Westbourne-terrace, Hyde-park.
E. ARMSTRONG, Esq., Carlisle.
H. BLOOD, Esq., Witham, Essex.
E. BLYTH, Esq., Asiatic Society, Calcutta.
G. LEDGER, Esq., 5, Caroline-street, Bedford-square.
JOHN J. STONE, Esq., 16, George-street, Mansion-house.
H. F. RICHARDSON, Esq., Anlaby-roads, Hull.

as well as from the many Patrons and the Members of the Society.

APPENDIX B.

LIST OF MEMBERS.

DONATIONS.

A Donation of £10 constitutes a Life Member.

[*The Names against which an asterisk * is placed are also Annual Subscribers.*]

*Miss Burdett Coutts, Holly Lodge, Highgate	£500	0	0
The Duke of Newcastle	10	0	0
*The Marquis of Breadalbane, Taymouth Castle, Perthshire, and 21, Park-lane	10	0	0
The Earl of Craven, Ashdown Park, Berks	10	0	0
*The Viscount Powerscourt, 1st Life Guards, Regent's Park	10	0	0
Sir G. Wombwell, Newburgh Park, Easingwold, Yorkshire	10	0	0
Lord Tredegar, Tredegar Park, Newport, Monmouthshire	10	0	0
Lord Southampton, Whitebury Lodge, Towcester	10	0	0
*Captain S. Dawson Damer, M.P., 2, Chapel-street, Grosvenor-square	10	0	0
Hon. Grantley F. Berkeley, Winkton House, Ringwood, Hants.	10	0	0
*Edward Ward Nix, Esq., 77, Lombard-street	10	0	0
Crockford, John, Esq. (The Field), 346, Strand	10	0	0
Edward Wilson, Esq., *Argus* Office, Melbourne, Australia	10	0	0
William Scott, Esq., Messrs. Jones and Co., York-street, Manchester	5	0	0
S. W. Baker, Esq., Hanson and Co., Constantinople	10	0	0
John Bardoe Bowes Elliot, Esq., Banchory, Aberdeen	10	0	0
Dr. Biggs, Templemartin Glebe, Brandon, co. Cork	1	0	0
*Higford Burr, Esq., Aldermaston, Reading	10	0	0

ANNUAL SUBSCRIBERS.

[*The Names against which an asterisk* is placed are also Life Members.*]

Coutts, Miss Burdett	£10	10	0
Breadalbane, The Marquis of	2	2	0
Powerscourt, The Viscount	2	2	0
Pomfret, The Earl of, Easton Neston, Towcester, Northamptonshire	2	2	0
Newport, The Viscount, 30, Wilton-crescent, Belgrave-square	2	2	0
Murchison, Sir Roderick I., Museum of Economic Geology, Jermyn-street	2	2	0
Eardley, Sir Culling Eardley, Bidwell Park, Hatfield, Herts	2	2	0
*Amhurst Amhurst, W. A., Esq., Sandgate, Folkestone	2	2	0
*Annesley, Captain, Guards Club	2	2	0
Bateman, Jones, Esq., Biddulph Grange, Congleton	2	2	0
*Bell, C. W., Esq.	2	2	0
Bicidor, Samuel H., Esq., Temple Court, Melbourne, Australia	2	2	0
Burr, Higford, Esq., Aldermaston, Reading	2	2	0
Bush, J., Esq., Clapham Retreat, Union-road, Clapham	2	2	0
Childers, Hugh, Esq., 57, Eaton-square	2	2	0
Clarke, Captain A., R.E., Army and Navy Club	2	2	0
Crichton, A. W., Esq., 11, Eaton-place	2	2	0
Damer, Captain S. Dawson, 2, Chapel-street, Grosvenor-square	2	2	0
Farnell, H., Esq., Holland House, Isleworth	2	2	0
Hawkins, B. Waterhouse, Esq., Belvedere-road, Upper Norwood, S.	2	2	0
Hanley, Hugh, Esq., 1st Life Guards, Regent's Park	2	2	0
Huyshe, Rev. H., Rectory, Collumpton, Devon	2	2	0
Hunt, Rowland, Esq., Boreatton Park, Shrewsbury	2	2	0
Lowe, James, Esq., 15, Duke-street, Adelphi	2	2	0
MacKinnon, L., Esq., Bittersea House, Mill Hill, Hendon	2	2	0
Malcolm, J. (of Portallock), Esq., 7, Great Stanhope-street, May Fair	2	2	0

Murray, C. M., Esq., Pevridge House, Skipton Mallett, Somerset	£2	2	0
Neill, E. B., Esq., 9, New Palace Yard	2	2	0
Noble, John, Esq., Bury Hill, Taplow	2	2	0
Nix, Edward Ward, Esq., 77, Lombard-street	2	2	0
Orde, Sir John, Kilmory, Lochgilphead, N.B.	2	2	0
Scott, W., Esq., Jones & Co., York-street, Manchester	2	2	0
Sotheby, Mrs. Leigh, Buckfast Leigh Abbey, South Devon	2	2	0
Smith, Sir Charles	2	2	0
Sykes, Tatton, Esq., Stedmore, Malton, Yorkshire	2	2	0
Tegetmeier, W. B., Esq., Apiarian Society, Muswell Hill	2	2	0
Temple, The Chief Justice, 46, Elgin-crescent, Notting Hill	2	2	0
Townshend, C. S., Esq., Fellow of Jesus College, Cambridge	2	2	0
Thompson, W., Esq., Weymouth	2	2	0

CORRESPONDING MEMBERS.

M. Geoffroy St. Hilaire	Société Imperiale d'Acclimatation, Paris.
Dr. Bennett	Sydney, Australia.
E. Wilson, Esq.	Melbourne, Australia.
E. Fitzgerald, Esq.	New Zealand.
F. T. Stevenson, Esq.	Montreal, Canada.
E. S. Blyth, Esq.	Calcutta.
John Barton Acland, Esq.	New Zealand.
Captain Hardy	Halifax, Nova Scotia.
H. M. Consul Petherick	Khartum, Soudan, White Nile.

APPENDIX C.

ACCLIMATISATION SOCIETY.

THE SCOTTISH BRANCH.

PATRONS.

HIS GRACE THE DUKE OF BUCCLEUCH.
HIS GRACE THE DUKE OF ARGYLE.
HIS GRACE THE DUKE OF HAMILTON.
RIGHT HON. THE EARL OF BUCHAN.

COMMITTEE.

MARK SPROT, Esq., of Garnkirk.
DR. JAMES JEFFREY, President of the West of Scotland Angling Club.
W. J. DAVIDSON, Esq., of Ruchill.
GEO. ANDERSON, Esq., St. Rollox.
WILLIAM MALCOLM, Esq., of Glenmoray.
NEIL WILSON, Esq., Civil Engineer.
WILLIAM KEDDIE, Esq., Lecturer on Natural Philosophy.
WALTER PATERSON, Esq., Claremont Terrace.
JOHN FINLAY, Esq., 12, Renfield-street.
ALEX. HARVIE, Esq., South Wellington Place.
ALEX. H. DENNISTOUN, Esq., Glasgow.
THOS. DAVIDSON, Esq., Glasgow.
JAMES KING, Esq., Windsor Terrace.
JOHN GORDON, Esq., of Aikenhead.

Secretary—ROBT. M'COWAN, Esq., 17, Gordon Street, Glasgow.

APPENDIX D.

Society for the Acclimatisation of Animals.

TEMPORARY OFFICES—346, STRAND. W.C.

ACCOUNTS UP TO MARCH, 1861.

DISBURSEMENTS.	£	s.	d.	RECEIPTS.	£	s.	d.
Glasgow Expenses	15	0	0	Donations	606	10	0
Advertisements, Printing, &c.	38	9	10	Subscriptions	52	8	0
Bought Sheep.....	5	10	0				
Stationery	1	2	0				
Cash, Petty Expenses...	5	0	0				
„ Current	5	0	0				
Carriage of Birds	1	19	2				
Stamped Cheques	0	2	0				
	72	3	0				
Balance in hand	586	15	0				
	£658	18	0		£658	18	0

Examined and found correct, 20th March, 1861.

L. MACKINNON,
HUGH HANLY, } *Auditors.*

SEYMOUR DAWSON DAMER, *Chairman.*

March 20th, 1861.

ACCLIMATISATION SOCIETY

OF

GREAT BRITAIN, IRELAND, AND THE COLONIES.

SECOND ANNUAL REPORT.

1862.

SECOND

ANNUAL REPORT

OF THE

Society

FOR THE

ACCLIMATISATION OF ANIMALS,

BIRDS, FISHES, INSECTS AND VEGETABLES

WITHIN THE UNITED KINGDOM.

1862.

OFFICES:

3, DUKE STREET, ADELPHI, LONDON. W.C.

LONDON:
Printed by JOHN CROCKFORD, 10, Wellington Street, Strand.

SOCIETY FOR THE ACCLIMATISATION

OF

Animals, Birds, Fishes, Insects and Vegetables

WITHIN THE UNITED KINGDOM.

PATRONS.

Albemarle, The Earl of
Breadalbane, The Marquis of
Bury, The Viscount
Berkeley, The Hon. Grantley F.
Blackwell, Thomas, Esq.
Conyngham, The Marquis of
Clanricarde, The Marquis of
Craven, The Earl of
Coutts, Miss Burdett
Childers, Hugh, Esq.
Chamberlayne, Thomas, Esq.
Drummond, Andrew, Esq.
Dawson, T. Pilkington, Esq.
Eardley, Sir Culling Eardley
Gould, J., Esq.
Günther, Dr.
Hill, The Viscount
Knapp, William, Esq.
Lichfield, The Earl of
Malmesbury, The Earl of
Mountcharles, The Earl of
Murchison, Sir Roderick I.
Newcastle, The Duke of
Newport, The Viscount
Owen, Professor
Pomfret, The Earl of
Powerscourt, The Viscount
President of the Royal College of Surgeons
Rutland, The Duke of
Sutherland, The Duke of
Somerton, The Viscount
Spencer, The Earl of
Southampton, The Viscount
Tankerville, the Earl of
Tredegar, Lord
Townsend, Henry, Esq.
Temple, The Chief Justice
Uffington, The Viscount
Vyse, Col. Howard
Wombwell, Sir George

COUNCIL.

The Marquis of Breadalbane
The Viscount Powerscourt
The Viscount Gage
The Hon. Grantley F. Berkeley
Higford Burr, Esq.
J. Crockford, Esq.
B. Waterhouse Hawkins, Esq.
L. Mackinnon, Esq.
Capt. S. Dawson Damer, M.P.
E. W. Nix, Esq.
C. S. Townshend, Esq.
A. W. Crichton, Esq.
Hugh Childers, Esq.
E. V. Morgan, Esq.

President—THE MARQUIS OF BREADALBANE.

Vice-President—THE HON. GRANTLEY F. BERKELEY.

Bankers—Messrs. COUTTS & CO., Strand.

Secretaries—F. T. BUCKLAND, Esq., M.A. (2nd Life Guards.)
JAMES LOWE, Esq.

Treasurer—J. BUSH, Esq.

OFFICES—3, DUKE STREET, ADELPHI. W.C.

SCOTTISH BRANCH.

Patrons.

His Grace the Duke of Buccleuch.
His Grace the Duke of Argyle.
His Grace the Duke of Hamilton.
Right Hon. the Earl of Buchan.

Committee.

Mark Sprot, Esq., of Garnkirk.
Dr. James Jeffrey, President of the West of Scotland Angling Club.
W. J. Davidson, Esq., of Ruchill.
Geo. Anderson, Esq., St. Rollox.
William Malcolm, Esq., of Glenmoray.
Neil Wilson, Esq., Civil Engineer.
William Keddie, Esq., Lecturer on Natural Philosophy.
Walter Paterson, Esq., Claremont-terrace.
John Finlay, Esq., 12, Renfield-street.
Alex. Harvie, Esq., South Wellington-place.
Alex. H. Dennistoun, Esq., Glasgow.
Thos. Davidson, Esq., Glasgow.
James King, Esq., Windsor-terrace.
John Gordon, Esq., of Aikenhead.

Secretary.

Robt. M'Cowan, Esq., 17, Gordon-street, Glasgow.

GUERNSEY BRANCH.

Patron.

General Slade, Lieut.-Governor of Guernsey.

President.

Peter Stafford Carey, Esq., Bailiff of Guernsey.

Vice-President.

Henry Tupper, Esq.

Secretary.

Dr. S. E. Hoskins, F.R.S.

Treasurer.

Carey B. de Jersey, Esq.

Committee.

Hilary O. Carré, Esq.
Professor Ansted.
William Brock, Esq.
Edgar MacCulloch, Esq.
Henry Dobrée, Esq.
Dr. de Beauvoir de Lisle.

RULES.

I.

The purposes of the Society are—

1. The Introduction, Acclimatisation, and Domestication of Mammals, Birds, Fishes, Insects, and Vegetables, whether useful or ornamental.

2. The Perfection, Propagation, and Hybridisation of Races already domesticated.

3. The Spread of Indigenous and Naturalized Animals, &c., from parts of the United Kingdom where they are already known to other localities where they are not known.

4. The Procuration, whether by Purchase, Gift, or Exchange of Animals, &c., from British Colonies and foreign countries.

5. The Transmission of Animals, &c., from England to her Colonies and foreign parts, in exchange for others sent from thence to the Society.

6. The holding of Periodical Meetings, and the publication of Reports and Transactions for the purpose of spreading knowledge of Acclimatisation, and of inquiry into the causes of failure.

II.

The Society is to be controlled by a Council to be elected annually, consisting of not ess than twelve Members and the Officers of the Society *ex officio;* but the ordinary management of the Society will be conducted by a Committee of Management consisting of not less than five or more than nine Members of the Council (to be elected by the Council after its appointment), and the Officers of the Society *ex officio*. The functions of the Council are to determine what are the operations to be carried out; to recommend to the Society such alterations in the Laws as may seem necessary; to receive Reports from the Committee of Management upon matters connected with the Society; and to make Reports to the Members of the Society upon the progress of the operations. The functions of the Committee of Management are to carry out the operations directed by the Council, and otherwise to decide upon and carry out all details that may seem necessary for furthering the objects of the Society.

III.

The Annual Meeting of the Members will be held on the first Wednesday in the month of March in each year, to receive the Report of the Council and elect the Council and Officers of the Society for the ensuing year.

IV.

A Meeting of the Council will be held four times in each year; namely, on the third Tuesdays of February, May, August, and November. Five Members of the Council to form a quorum. A Special Meeting of the Council may be summoned at any other time by the Secretaries, under the direction of the Committee of Management.

V.

The Committee of Management shall meet on the first Tuesday in every month. Three Members of the Committee to form a quorum.

VI.

The Annual Subscription of the Members is 1*l.* 1*s.* A Donation of 10*l.* entitles the Donor to a Life Membership. The Annual Subscriptions are due on the first of January in each year for the current year, or within one month of becoming a Member. When Subscriptions are left unpaid after the period fixed for the payment of the same the defaulting Subscribers may be dismembered by the Council.

VII.

Persons desirous of becoming Members must signify the same by a letter to the Secretaries, and the letter must be countersigned by two Members of the Society. If no valid objection be urged in the interim, it shall be competent for the Committee of Management at its next or any subsequent Meeting to declare such applicant a Member.

VIII.

None but Members shall be entitled to purchase of or through the agency of the Society any Animals, Birds, Vegetables, &c.; and the Animals, Birds, Vegetables, &c., belonging to the Society shall be enrusted to the care of Members only. The Annual Report and all other Reports and Circulars issued by the direction of the Council and the Committee of Management shall be delivered to Members free of expense.

IX.

All Expenditure of Funds shall be under the control of the Council and the Committee of Management.

X.

The Accounts are to be presented at the Annual Meeting, audited by two Auditors, to be appointed by the Committee of Management.

XI.

Any Member who shall refuse to obey these Rules shall *ipso facto* cease to be a Member of the Society, and shall lose all right to any of its property, and the vote of a majority of the Council shall be a sufficient confirmation and declaration of the same.

Remittances may be made by Post-office Order or Cheque, addressed to JOHN BUSH, Esq., Treasurer, 3, Duke-steet, Adelphi. W.C.

SECOND ANNUAL REPORT

OF THE

ACCLIMATISATION SOCIETY,

MARCH, 25, 1862.

TO THE MEMBERS OF THE ACCLIMATISATION SOCIETY.

IT devolves upon the Council, at this the Second Annual Meeting of the Society, to present a Repor of the proceedings of the Society during the past year.

You will be pleased to hear that the anticipations formed of the success of the Society have been so far realized, and that (considering the short time that it has existed, and the difficulties that usually beset an attempt to introduce novel ideas and novel experiments) its condition is highly satisfactory. Whereas at the last annual meeting we numbered 18 Donors and Subscribers, and 39 Annual Members and Subscribers, the composition of the Society at the present time may be stated as follows :—

Patrons	41
Life Members	24
Annual Subscribers	48

As regards the state of the funds of the Society, Mr. Bush (our active and careful Treasurer) will now present his Balance Sheet, from which you will perceive that there is at the Banker's a balance of 422*l.* 14*s.* 4*d.*, after payment of all expenses, and a sum of 150*l.* in the hands of Messrs. Maheson & Co., to be expended in Chinese sheep.

We will now proceed to place on record the proceedings and actual operations of the Society during the past year.

The business of the Society having acquired proportions which necessitated a proper organisation for its due discharge, the Council resolved to avail itself no longer of the permission to meet at the *Field* Office, so kindly accorded by the Proprietors of that Journal, but to take Offices for the use of the Society. A Com-

mittee was accordingly appointed in November last for this purpose, and the Offices were taken at No. 3, Duke Street, Adelphi, which are now in the occupation of the Society, and a Clerk was engaged to assist in transacting the business. About the same time, it was suggested that Mr. James Lowe should become associated with Mr. Buckland in the office of Secretary, and that gentleman having intimated his willingness to accept the office, he was accordingly appointed by the Council Joint-Secretary with Mr. Buckland.

Her Majesty's Secretary for the Colonies, His Grace the Duke of Newcastle (who is one of the Patrons of the Society, and also a Life Member), being desirous of doing all in his power to aid the progress of the Society, most kindly caused to be distributed to the Governors of our Colonies throughout the World, copies of the First Annual Report of the Society, accompanied by letters from His Grace, especially recommending the Society to the notice and good offices of these Gentlemen, and requesting them to do all in their power to aid the Society. The following satisfactory results have been obtained.

First.—The following official Letter from Sir G. Bowen, Governor of Queensland, to His Grace the Duke of Newcastle.

Government House, Brisbane, Queensland,
3rd November, 1861.

My Lord Duke,

I have the honour to acknowledge the receipt of your Grace's Circular Dispatch of the 29th July, ultimo, and of the accompanying copy of the First Annual Report of the Society for the Acclimatisation of Animals.

2. I take a keen interest in the success of that Society, and I should gladly form a branch association in this colony if I were furnished with the necessary Rules and other Information. Meanwhile, the Secretary of the Society could not do better than to put himself in direct communication with the gentlemen resident in Queensland, whose names I annex, and who will be found both able and ready to assist him as Corresponding Members.

3. Embracing a territory three times larger than that of France, with strongly marked varieties of soil and climate, Queensland affords a rich and wide field for the operations of the Acclimatisation Society. We have numerous species of the genus Kangaroo, of various sizes, habits, and colours. We have a great variety of Wild Geese and Wild Ducks, many of them of beautiful plumage, and of excellent flavour. There are also several different kinds of Quail. But above all, I would recommend more especially to the notice of the Society:—first, the Bustard, or Wild Turkey of our plains; secondly, the *Talegalla*, or Mound-building Turkey of our forests; and, thirdly, the *Wonga*, the Queen of the Pigeon tribe. I am informed by competent judges that all these last named birds could be easily acclimatised, and even domesticated in England, while I can bear my own personal witness, as a sportsman, that they all afford capital shooting, and *delicious eating*. The *Wonga*, in particular, combines, in the most delicate proportion, the flavour of the Pheasant and of the Grouse. I enter into these details, because I perceive from its First Annual Report, that the Acclimatisation Society expects "to command the general respect and support

"of the public by importations calculated to increase and agreeably vary the natural "products of the country, and, *above all, the food of the people.*"

I have, &c.,

(Signed) G. F. BOWEN.

His Grace the Duke of Newcastle, K.G., &c., &c., &c.

A. C. GREGORY, Esq., Surveyor-General, Brisbane, Queensland.
CHARLES COXEN, Esq., M.L.A., Brisbane.
R. B. SHERIDAN, Esq., Collector of Customs, Maryborough.
HENRY RAWNSLEY, Esq., District Surveyor, Gayndah.
JOHN JARDINE, Esq., Police Magistrate, Rockhampton.
G. ELPHINSTONE DALRYMPLE, Esq., Commissioner of Crown Lands, Port Denison.

In reply to this, your Secretaries have, under the direction of the Council, written to Sir George Bowen, accepting his offers of assistance, and requesting consignments of the Bustard, the Talegalla, and the Wonga Pigeon, with any other Birds, Animals, or Vegetables which would be likely to be of service to the Society; proferring in return the services and co-operation of the Society in procuring for the Queensland Society, when formed, whatever they may require from this country. Letters have also been sent to the Gentlemen named in Sir George Bowen's dispatch, inviting their aid in carrying out the suggestions of His Excellency, and urging them to form an Acclimatisation Society for their Colony. The friendly and practical tone of Sir George Bowen's letter justifies the Council in expecting from a correspondence commenced in such a spirit of reciprocity, results of the highest importance and benefit to the Society.

Secondly—The following Letter from the Governor of New Brunswick :—

Government House, Fredericton, New Brunswick,
August 31st, 1861.

My Lord Duke,

I have to acknowledge the receipt of your Grace's Dispatch Circular of the 29th ultimo, enclosing a copy of the First Annual Report of the Society for the Acclimatisation of Animals.

At present the pursuit of Zoological Researches is, in this province, generally confined to those points which affect directly the material interests of Agriculture.

But I shall feel great pleasure in promoting, so far as I can, the objects of the Society.

I have, &c.,

J. H. T. MANNERS SUTTON.

His Grace the Duke of Newcastle, K.G., &c., &c., &c.,
Colonial Office.

Thirdly.—The following Letter from the Governor of Prince Edward's Island :—

Government House, Prince Edward Island,
14th October, 1861.

Sir,

His Grace the Duke of Newcastle has forwarded to me a copy of the First Annual Report of the Society for the Acclimatisation of Animals.

His Grace expresses the wish that I should promote the objects of the Society, should the circumstances of this Colony afford any suitable means for the purpose.

I have assured his Grace of my willingness to do so, and added that with this view I should place myself in communication with you.

I herewith enclose two small works, recently published here, intituled respectively "Sutherland's Prince Edward Island," "Geography, Natural, and Civil History," and "The Progress and Prospects of Prince Edward Island."

These books give in some detail the Natural History of this Colony. If, after an examination of these portions of the works in question, you would desire to be supplied with specimens, I shall do my best endeavour to procure them for the Society.

I have the honour to be,

Sir,

Your obedient servant,

GEORGE DUNDAS.

F. T. Buckland, Esq. (2nd Life Guards), 346, Strand, London.

Suitable replies have been returned to these friendly communications.

In addition to these channels which have been opened to the Society by the kindness of the Duke of Newcastle, various other offers of assistance have arrived from more private quarters, not less valuable in degree, and all opening up an extensive prospect of usefulness whenever the funds of the Society enable the Council to take full advantage of them.

In a Letter dated "Pitt Street, Sydney, Australia," Mr. W. J. Stephens announces the formation of an Acclimatisation Society of New South Wales, and invites our own Society to co-operate with the same—

The New South Wales Acclimatisation Society undertake that they will endeavour to procure under the most favourable circumstances such examples of Plants or Animals attainable in this country (N. S. W.) as your Society may desire to possess or to distribute, and they would solicit the good offices of your Society in advancing by similar means the common objects of both.

In a Letter, dated "Auckland, New Zealand, 9th December, 1861," Mr. Edmund Thing, the Honorary Secretary of the Acclimatisation Society of New Zealand, communicates to this Society the desire of the Members of the New Zealand Society to enter into friendly relations of mutual services with this Society. "Should any interest be felt (writes Mr. Thing) to obtain any of the New Zealand Birds, I will take the earliest opportunity of forwarding the best collection that can be obtained." A reply to

this Letter has been sent, intimating the willingness of this Society to co-operate with the Colonists of New Zealand in any way that may seem feasible.

Another important Letter, offering assistance of the most valuable description, has been received from Mr. Blackburrow, a gentleman who has recently settled in Southern Africa :—

Broadleage de Maritzburg, South Africa,
October, 1861.

DEAR SIR,

I have purchased the above estate, on which I hope to be settled shortly, and have no doubt I shall be able to procure some Antelopes and Bustards for the Acclimatisation Society, a fine fawn of the Reed Buck having been yesterday promised me should its owner succeed in rearing it. I think I may have chances of purchasing *young Elands at about 5l. per head.* Would this be worth doing ? How should the animals or birds be sent home ? If by steamer they would have to be landed at the Cape, remain there it may be a week or two and then be reshipped, all of which would I think be injurious to them. If they proceed by sailing vessel direct, they would be three months at sea. If you determine on the latter, had you not better arrange with the Captain of some vessel coming here to take back anything I may chance to have ready ?

Could the Society in any way aid me in getting some Alpacas ? As they do so well in Australia, I have no doubt they would succeed here.

The tales I hear of game in the interior are miraculous, and next winter I shall take a wagon up and see. In the meantime any animals that may come in my way, especially domesticated ones, I think I had better secure at reasonable rates for the Society. Please to let me hear from you by return mail; and

Believe me,

Yours very truly,

W. E. BLACKBURROW.

F. T. Buckland, Esq.

If you determine of having animals per steamer, Capt. Davie of the "Atheist" will take every care of them from the Cape.

Recognising the utility of the movement which was begun last year by the formation of a Branch Society in Scotland, the Council hails with satisfaction the inauguration of another Branch Society in Guernsey. The opportunity of a visit to the Channel Islands was taken advantage of by Mr James Lowe to introduce the subject of Acclimatisation to the Inhabitants of Guernsey, and with such good effect that, at a Meeting held at the Royal Court House, St. Peter Port, Guernsey, under the presidence of the Bailiff of the Island, a Branch Society was formed, and a Committee and Officers appointed, comprising the principal Inhabitants of the Island, all of them gentlemen deeply interested in the cultivation of the soil, and in the subjects which occupy the attention of this Society. General Slade, the Lieutenant-Governor of Guernsey, accepted the Presidentship of this Branch ; and Peter Stafford Carey, Esq., the

Bailiff, the Vice-Presidentship; whilst Dr. Samuel Elliot Hoskins, F.R.S. (a gentleman whose scientific attainments are well known) was appointed to the office of Secretary. Having regard to the mildness of the climate in the Channel Islands, and to the special advantages which they offer for conducting experiments, the Council is satisfied that Guernsey will prove of most important assistance to the operations of the Society, by serving as a sort of acclimatising ladder to aid the more tender Animals and Vegetables of still warmer latitudes on their way to our shores. Relations of the most friendly character have already been established between the Guernsey Branch and the parent Society, as the correspondence will show, and communications have already been opened relating to the cultivation of Oysters in Guernsey, and to the introduction from thence of certain Vegetables, of which more particular mention will presently be made.

We shall now proceed to mention in detail the various experiments which are being conducted by the Society, classifying them in order :—

Mammals.

CHINESE SHEEP.

The breed of Chinese sheep having been recommended to the Council as extremely fruitful in breeding, excellent for eating, hardy in their nature, and obtainable at a comparatively low cost, a sum of 150*l.* was voted out of the funds for the purpose of obtaining a supply of this animal. Through L. Mackinnon, Esq., the kind assistance of Messrs. Matheson and Co. (the eminent Merchants) was obtained, and with the happiest results. By advices received from that firm it appears that two lots, each consisting of six ewes and two rams, have been purchased in China, and shipped for this country, at a cost of 42*l.* 13*s.* 4*d.* per lot. In addition to this cost must be calculated the loss during the voyage, and a proper remuneration to the ship's officers, who take charge of the animals ; but having regard to all these causes of expense, the Council expects next year to be able to offer to the Members lots of the sheep for breeding purposes. The first lot shipped by the "Wagoola," from Shanghai, arrived in London a few days ago, and have been temporarily received by Mr. Bush, the Treasurer. One ewe died upon the voyage, after dropping three lambs on board the ship, and one, also in lamb, which was landed in a weak state of health, has died since. We are happy to be able to report however that the remaining four ewes and two rams are in excellent health and condition, and that they manifest every sign of thriving, and the ewes are all believed to be in lamb. Mr.

Bartlett, of the Zoological Gardens, reports that "they breed twice in the year, and produce four and sometimes five at a birth."

Another lot of six ewes and two rams has also been advised as having been shipped in the "Veloz," and these are expected to arrive shortly.* Other lots will follow, until the whole of the sum voted for the experiment has been expended, and the Council entertains a confident expectation that before the next Report is presented, the permanent and extensive establishment of the Chinese Sheep in England will be an accomplished fact.

ELANDS.

The Council regrets that the state of the finances does not yet warrant the Society in attempting, upon a large scale, such a costly experiment as the breeding and domestication of the Eland. It has not, however, lost sight of the value and importance of such an operation, all experience tending to confirm the opinion already entertained, that this animal is to be recommended for its elegance of form and for its utility both as a farm animal and as an article of food. The fact, that it is hardy enough to thrive in this country, has been fully established; and having regard to the offer of Mr. Blackburrow,† to obtain young Elands in Africa at about £5 per head, the Council entertains a hope that an improved state of the funds may soon enable the Society to enter seriously upon that undertaking.

In the meantime, the Council has to regret that unavoidable circumstances caused the failure of an attempt to obtain a hybrid between the common Cow and the Eland—an experiment which was thought desirable. The same experiment has, however, since been made by the Zoological Society under more favourable circumstances, and it is stated that success is expected.

DEER.

One of the Life Members, Viscount Powerscourt (who has paid great and most commendable attention to the subject of Acclimatisation, and has successfully carried out some highly interesting experiments), reports that he has been engaged in experiments on the Hybridisation of the Deer tribe. He reports that he has now two living specimens of undoubted hybrids between the Sambur and Red Deer, having many characteristics of both—the ears and coat of the Sambur with the general form of the Red Deer. His herd of Sambur now consists of five females and one male, besides the two hybrids, all doing well, and looking as if the climate agreed with them. He has also in his park a pair of Japanese Deer, which are like Sambur in appearance, though

* Since printing the above the lot of eight sheep has arrived by the "Veloz," with six lambs all in good condition.

† See Letter, p. 13.

not so large as the Roe Deer. His experiments in breeding the Wapiti have been crowned with success, the herd (of two fine stags and two hinds) in his park being now quite acclimatised.

Birds.

GUANS AND CURASSOWS.

The introduction of new varieties of edible and ornamental Poultry has been an object foremost in the consideration of the Council, whose Members do not disguise from themselves that it is an operation beset with great difficulties, which will require judgment and perseverance before they can be overcome.

The testimony of Travellers and Sportsmen establishes beyond a doubt the fact, that among the Birds found wild in Central America, the Guan (*Penelope cristata*) and the Curassow (*Crax globosa*) offer remarkable advantages in all desirable qualities. They are ornamental, and their flavour is well spoken of. Various attempts have been heretofore made to domesticate and breed them in this country, with (it must be admitted) moderate success. Among others, however, the late Lord Derby made very strenuous efforts in that direction, and he succeeded in breeding these birds in small quantities at Knowsley. The Council, taking heart from this fact, considers that this partial success ought to be accepted as an indication that a patient investigation into the habits and natures of these Birds will lead to still more successful results, and that the Society should endeavour, by all reasonable means within its power, to accomplish the introduction of these very desirable Birds.

On the 28th of August four Guans were received by the Hon. G. Berkeley from Mr. Dougall, of Glasgow.* These birds are now healthy and in good condition. Many interesting facts as regards their food and habits have been recorded by Mr. Berkeley.

"They feed chiefly on barleymeal, mixed as thickly as possible, and only one out of the four will eat maize. They are all very fond of bread, raspberries, blackberries, &c. The food necessary for pheasants answers very well for Guans. They go to roost after their morning feed, and their nature is to perch and roost a great deal. They are particularly sensible and intelligent, and will live and remain round the house and garden as well as tame fowl. They are fond of roosting in very high trees, but they will easily conform to roosting in a fowl's house. I have placed two of my four with Mr. John Mills, junior, at Bisterne, to breed in his aviary, and kept two myself in my aviary.—(Report from Hon. G. Berkeley. See also an interesting account in *The Field*, No. 454, Sept. 7, 1861.)

Two Guans and one Curassow were purchased and placed under the charge of your Treasurer, Mr. Bush. We regret to state that

* These graceful birds were imported by a gentleman from Rio Grande, South America (lat 32° S., long. 52° 12′ W). The American name is "Jacu"—the "Turkey of the Woods." They are from a mountainous and temperate region. The finest poultry known at Rio Grande is a cross between the male Guan and the Common Domestic Fowl."—("A Glasgow Gunmaker," in *The Field*, No. 449.)

one of these Guans has lately been killed by an accident. The rest, however, have hitherto done very well. (See Mr. Bush's Report, *Field*, No. 463.)

To try the experiment on a larger scale the Council, on the 30th of November, voted a sum of 50*l.* towards the introduction of Guans, and 50*l.* towards the introduction of Curassows. Your Secretaries, in carrying out these instructions, sought the advice of a mercantile gentleman well acquainted with Honduras and the country near the Gulf of Mexico, and, acting upon his advice, they have communicated with Mr. Seymour, Her Majesty's Consul at Belize, inviting his co-operation in the matter. It has been suggested that the best mode of action will be to employ the Mahogany-cutters, and others engaged in the interior, to bring nests of pullets to Belize, whence, when the birds are a little advanced in growth, they may be shipped on board the steamers of the Royal Mail Steam Packet Company for transmission to this country. It is satisfactory to know that, in carrying this out, the Society will have the advantage of the aid of the Officers of the Royal Mail Steam Packet Company, whose Managers (Captain Wilson and Mr. Robert Marshall, with the approbation of their Directors) have kindly promised to give the Society the benefit of all the facilities in their power. Should nothing untoward occur to interfere with these arrangements, the Council hopes that specimens of these Birds may be offered to the Members before the expiration of the year.

HONDURAS TURKEY.

Through the same source, the Council expects shortly a consignment of a fine cross between the Wild Turkey of Honduras and the European Turkey. These birds are reported to be extremely beautiful in plumage, of fine growth, and very delicate eating.

CHINESE SAND GROUSE.

On the 18th of May, 1861, the Society received as a present from J. Dyce, Esq., Royal Artillery, seven living Sand Grouse (*Syrrhaptes paradoxus*), which that gentleman brought from China with him. His Royal Highness, the late lamented Prince Consort (who took the greatest interest in the subject of acclimatisation), undertook the charge of these birds, and they are now in the Royal Aviary at Frogmore; a special compartment of the aviary having, at Her Majesty's own order, been wired over for their accommodation.

CANADIAN GROUSE.

On the 15th of June, Captain Hardy, Royal Artillery, residing at Halifax, Nova Scotia, transmitted to the Society a consignment of twenty-four eggs from two nests, and also thirteen eggs from two nests, the eggs of the Ruffed Grouse of Canada (*Tetrao umbellus.*)

These eggs were immediately placed under hens at the Royal Aviary, and on the premises of Lord Tredegar, Higford Burr, Esq., and the Hon. Grantley F. Berkeley, and we regret to state that this experiment, though conducted with every care, did not succeed, the eggs being probably in some way injured during their transport. One lot had been partially incubated before being taken from the nest, and were of course fruitless.

The thanks of the Society are due to Captain Hardy for setting his hunter to watch for these eggs and take them from the nest at the right time.

PRAIRIE GROUSE.

The Hon. G. Berkeley has in his possession three male Prairie Grouse (*Tetrao cupido*) from America, which he reports as being healthful in form and feather, and very tame; he proposes to make a cross between these and the grey hens of Scotland. He expects further consignments of these Prairie Grouse from friends in America.* As regards the food of these birds in this country, he has ascertained that they are immensely fond of the *Gautheria*, a species of North American shrub that yields an edible berry, very pleasant to the taste. This shrub is also known by the name of "The Partridge Berry," or "Mountain Tea." Mr. Berkeley's birds are also very fond of the bloom and seeds of the common heather, but their chief food is the young grass of various kinds, and maize.

AMERICAN QUAIL.

Specimens of the American Quail have been received from Canada, through the kindness of G. Stevenson, Esq.; and these birds are now under the care of Lord Craven, Tatton Sykes, Esq., Lady Dorothy Neville, and Mr. Bush.

Mr. Tatton Sykes has sent the following report of these birds:—"I kept the Quails till August last in an aviary, and then turned them out, thinking that they would remain in the woods around this place and would be seen during the shooting season, but with the exception of one that was risen by a person Partridge shooting I never heard more of them, and I have no doubt but that they migrated to some other country." This report will serve to substantiate the Hon. G. Berkeley's remarks as to the necessity of

* The Hon. G. Berkeley gives the following report relating to the permanent acclimatisation of Game Birds:—"Lord Malmesbury, last Spring, let all his Prairie Grouse and American Quail out, the consequence of which was that one Grouse was killed near Cheltenham. A pair of the Quails had a nest at Heron Court, and hatched it out; but they have never been seen since, having been, probably, killed by vermin." He then gives the following hints, derived from practice, which will prove so valuable in the future progress of acclimatisation, &c.:—"These two facts, of at once enlarging birds, serves to impress upon all experimentalists that *it is useless to turn the imported birds out*. They can only hope to naturalize and locate the young bred from the eggs in aviaries. Reared on the spot, you give to the young birds a local attachment. Old birds turned down have no local attachment, but wander about lost and strange."

breeding the young birds on the spot where they are intended to remain.

GELINOTTE.

The Secretaries are in communication with Mr. John Allen, and the Rev. R. Barnard, of Christiana, Norway, who will do their best to send over living specimens of the Gelinotte.

CROSS BETWEEN THE PINTAIL AND THE COMMON DUCK.

The Vice-President of the Society, the Hon. G. Berkeley, has, in pursuance of one of the objects of the Society, been pursuing his experiments on the Hybridisation of Birds, and has arrived at a valuable cross between the Pintail and Common Duck, a Hybrid which is not only handsome in its plumage, but forms an excellent variety for the table.* Several lots of these have been distributed among your members at reasonable rates. Mr. Berkeley is also making a series of experiments in his water aviaries with the Pochard, Scaup Ducks, Gadwall, Rouen, Buenos-Ayrean and Muscovy Ducks. He is also expecting from America living specimens of the Wood Duck, the Canvas-back Duck, and the Blue-winged Teal. The Society, in February last, procured, by purchase, a consignment of the Dusky Duck, with a view to experiments in Hybridisation, and further multiplication. These birds are now in charge of Members.

HYBRIDS.

Other experiments in Hybridisation have also been made by Lord Craven, who acclimatised and killed for the table, at Ashdown Park, the black "Kallagee Pheasant" from the Hills in the Northern part of India. They are very good eating, and precisely resembling in colour and flavour the flesh of the Common

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* The following interesting and important communication relative to this experiment has been received from Mr. Berkeley :—

A circumstance has happened, in regard to the experiment made by Lord Craven, at Ashdown Park, which bears upon the theory that all species have a common origin. From a Mallard, of the Pintailed cross (supplied him by me) and the large tame "Rouen Duck," he has bred some beautiful birds, the males carrying the elongated tail-feathers of the sire.

From a brother of this Mallard, and the large tame black "Buenos Ayrean Duck," I also bred a number of birds, not one of which carried the long feathers in the tail, though a slight peculiarity in the curled feathers marked the origin. Had this variety in these two crosses been only occasional, or in an instance or two, it would not have struck me so much; but for a large number to carry so distinguishing an illustration of origin from one species of duck and not from the other, though the parent sires of each were brothers, and precisely alike, is well worthy of remark.

Lord Craven finds, in regard to his experiment, precisely that which I have found, that ducks thus bred from the Pintail may be killed all the year round as excellent for the table, never acquiring the hardness to which the meat of the tame duck is liable when grown to maturity.

GRANTLEY F. BERKELEY.

English Pheasant. The obstacle to their being very serviceable in this country to the bag and to the kitchen to any great extent is that, like the Golden Pheasant, they do not breed till the second season. It is yet to be ascertained if they will breed with the English Pheasant, and if the offspring will be a mule.

The "Cheer Pheasant" has also been acclimatised and crossed with the English Pheasant, at Ashdown Park; and Lord Craven has in his Aviary at this moment two fine mules of this cross, the bars on the tail of the "Cheer Pheasant" being fully illustrated in both specimens. It is expected that these birds will continue to breed, a fact which will be ascertained during the approaching season.

In regard to the crosses ascertained and those that will cross, but whose further fecundity is yet in doubt, are the Capercalzie and Grey Hen, the Pheasant and Grey Hen, the Cheer Pheasant and the Common English Pheasant. The *one* cross that has proved valuably fecund is the Pintail with the Tame Duck, of Buenos-Ayres, or Rouen, or any Common Tame Duck. The two crosses that are proved as utterly final are those between the Common English Pheasant and the Barn-door Hen or Bantam, and between the Widgeon and Duck, two of which latter species are in the British Museum; the female specimen lately sent them by me, and the male specimen which has long been there under the erroneous name of the Bimaculated Duck.—(Report by Hon. G. Berkeley.)

Fish.

The desirability of introducing a new Pond Fish has been carefully considered by the Council, and Mr. Edward Wilson, of Melbourne, Australia, having promised to send over a consignment of the "Murray Cod" (a fish which was judged to be fit for that purpose), a premium of 10*l.* was offered to the ship's officer who should succeed in bringing over alive at least half the number shipped either of that or some other equally suitable pond fish. Specimens of the "Murray Cod" were accordingly shipped by Mr. Wilson on board the "Lincolnshire," but when that ship arrived in the London Docks on the 9th day of October last, Messrs. Bush and Buckland, going on board, had the mortification of finding that all the fish had perished during the voyage. It appeared, however, that this untoward result was due to neglect on the part of those who had charge of the fish, rather to any insuperable difficulty in the way of transmission, and the Council does not see in this mishap any reason to despair of getting specimens of the fish over when a knowledge of the reward offered shall have stimulated one of the ship's officers to take a little care of the fish during the passage.

POND FISH.

The Council has earnestly considered the desirability of introducing a new Pond Fish into this country, and *Lucio Perca* having been recommended for the purpose, enquiry has been made as to the possibility of attempting the experiment. A gentleman of some authority in matters relating to pisciculture has been applied to on the subject, but his replies show that the experiment would be very costly and very uncertain of success. Under these circumstances, the Council have deferred making their experiment for the present.*

CRAWFISH.

One of the objects of the Society being to spread indigenous living creatures from parts of the United Kingdom where they are already known to other localities where they are not known, several experiments have been made as to the transmission of Crawfish from Oxfordshire to Scotland, the specimens have been kindly presented by Mr. Henry Early, of Witney, and others were purchased by the funds of the Society. About 1,100 have been sent in three lots, to be distributed throughout various parts of Scotland. The last lot of 400 were sent to the President of the Society, Lord Breadalbane, and all are reported to be in a thriving condition. It is to be remarked that the Crawfish sent were all in spawn, so that by this time the figures 1,100 only represent a portion of the Crawfish now in Scottish waters.

PEARL MUSSELS.

As if, in a manner, to return the compliment, the Council has attempted to transplant the Pearl-bearing Mussels of the Tay from Scotland to the South of England, and in the month of June last a number of these Mussels, presented by Maxton Graham, Esq., of Perth, were sent to Mr. Buckland at Windsor, who distributed them for experiment to the Hon. Grantley Berkeley, Lady Dorothy Neville, and C. Penruddocke, Esq. From the reports of these members, it appears that the mollusca are doing well, and have apparently accommodated themselves to their new habitats.

Silk Worms.

One of the most energetic and persevering members of the Society, Lady Dorothy Neville, has been engaged in experiments relative to the cultivation of the *Bombyx Cynthia* Silk Worm in this country. Her Ladyship reports as follows:—

"Last year I hatched them by sun heat, and when about one week old I placed them on the Ailanthus shrubs, and except

* An instructive article on the subject of Acclimatising Fish appeared in *All the Year Round* (Jan. 8, 1861).

having for a few days to watch the ants, who appeared to like them, and wished to carry them off, I had no further trouble with them; they remained eating until they formed their cocoons in the leaves; I do not think it would be possible to get in England two crops of cocoons in a season, I mean there will not be time for the first eggs to spin and become eggs again, and those eggs to hatch and spin before the cold commences; but one might go on with different sets; the trees (Ailanthus), though bared to nearly the stem, will shoot up stronger than ever as soon as the worm is removed. I sent samples of my cocoons to the gentleman who buys all the French ones. He pronounced them magnificent, and said he would buy as many as I had."* The Council has to congratulate Lady Dorothy Neville upon the success which has attended her efforts in this important experiment.

Vegetables.

The paramount importance of Vegetable food to the great bulk of the community, and the dangers which, of late years, have menaced the cultivation of the Potato, have directed the attention of the Council to that branch of Acclimatisation. After a careful examination of all the facts that could be distinctly ascertained, it seemed that the Vegetable which gave the best promise of becoming an article of common use was the *Dioscorea batatas*, or Chinese Yam, and to this therefore the Council has paid careful attention. It is true that many persons (some of them Members of the Society), who have attempted the cultivation of this Vegetable, do not appear to have arrived at results which justify them in reporting well of it. It has been objected to it that it is slow of growth; that the depth to which the tubers penetrate downwards into the soil renders it extremely difficult to dig them up entire; and, finally, that the root, when matured, has no particular merits as an article of food. On the other hand, as it no less undoubtedly appears that other persons who have essayed the cultivation have arrived at diametrically opposite conclusions, and that the extensive cultivation of the Yam, for the purpose of food, is now an accomplished fact in France, the Council cannot but think that everything depends upon the mode of cultivation. They would suggest also in this, as in all other experiments in Acclimatisation, that no amount of failure should destroy the effect of a single instance of success; and that, where one experiment has succeeded, there is every reason to believe that further investigation must lead to the discovery of the elements which will render success invariable.

* Lady Dorothy Neville has written a Pamphlet upon the Culture of the Silk Worm, it is published at *The Cottage Gardener* Office, 162, Fleet-street.

As an example of this principle in connection with the *Dioscorea batatas*, it may be mentioned that the Vegetable has been cultivated by several of the most enterprising cultivators in Guernsey, and that all, with one exception, report unfavourably of it. The single exception is Hilary Carré, Esq., the Lieutenant-Bailiff of the Island, a gentleman who has paid the greatest attention to the subject of Acclimatisation; and the gentleman (far from condemning the *Dioscorea*) recommends it as an article of food, and purposes extending his cultivation of it. The conclusion to be arrived at from this is, that Mr. Carré has taken the right way to cultivate, and that the others have not.

In answer to a communication sent to the Societé d'Acclimatation at Paris, that Society kindly transmitted in May, 1861, a box of the tubers of the *Dioscorea*. A portion of these were planted in the nursery grounds of Mr. Whomes, of Windsor, under the superintendence of Mr. Buckland, and in the gardens of some Members of the Society.*

In November last some of the tubers so planted at Windsor were dug up for experiment, and were cooked upon various occasions, and so tested by various Members of the Society; the verdict in every case being strongly in favour of the Vegetable. In a report upon the subject, published in *The Field* of the 16th November last, the following statement was made:—

> The Secretaries also reported that the cultivation of the Chinese Yam (*Dioscorea batatas*) was, up to this point, a decided success. Roots of the plant intrusted to Mr. Whomes, of Windsor, had been planted in February last, and were now thriving. Some of the tubers had been dug up, and had been sent, by way of experiment, to Lord Pomfret, Capt. Dawson Damer, Mr. Higford Burr, and Mr. Lowe. Although the Vegetable is said to attain perfection in the second year of its being in the soil, and the roots now submitted were necessarily very much less than their full growth, the experiment was in all cases entirely successful. The roots were tried both plain boiled, and with white sauce, and were unanimously pronounced to be delicious. In texture and flavour they are excellent, and, if one Vegetable can be compared with another, may be said to resemble very good mashed Potatoes. Samples of the Chinese Yam are now in the hands of several persons for cultivation. L. Mackinnon, Esq., Bittacy House, Hendon (one of the Members of the Council), is cultivating it in his garden, but has not yet dug any for experiment. The evidence of gardeners and others acquainted with the plant, leads to the belief that the Chinese Yam is an excellent Vegetable, and with proper cultivation will grow to an enormous size. It should be planted in trenches, and the lighter and more sandy the soil the better it will thrive. In the face of the continued failure of the Potatoe, the Secretaries submitted that to encourage the cultivation of the Chinese Yam would be a great national benefit. They therefore requested the Council to authorise them to offer samples of the root to Members at a reasonable price, and for that purpose to make arrangements to obtain a sufficient supply of the root. As the proper time for planting is the end of February, it would be necessary that these arrangements should be immediately entered into, and that Members should be urged to lose no time in making application for samples.

In pursuance of this plan, arrangements were made to obtain a supply of the tubers fit for planting, and the members were in-

* The head gardener at the Gardens of the late Dutchess of Kent has cultivated the *Dioscorea* for the last three or four years, and has obtained tubers of excellent growth and quality.

formed that parcels of them would be issued at the proper time in return for remittances of ten shillings each. The result of this has been that applications for tubers have been received from twelve members residing in different parts of the country, and parcels containing upwards of forty tubrs each have been sent accordingly. The cultivation of this Vegetalle seems therefore in a fair way of being properly tried, and it is hoped that the members who have undertaken the experiment will not fail to communicate to the Council the result of their exprience.

To meet the objection which has been made to the downward growth of the tubers, it has been suggested that the experiment should be tried of paving the trenches in which they are planted with tiles, so as to force the tubers to take a lateral direction.

The size to which the tuber will develop themselves is shown by specimens presented to the Society by the Guernsey Branch and by Lord Walsingham. One specimen sent by the former weighs 3lbs. 15oz.

ARROWROOT.

On his return from Guernsey Mr. Lowe reported to the Council the successful cultivation in that island of the Brazilian Arrowroot, and presented the following report on the subject by Peter Martin, Esq., of Port Remier, the Sheiff of Guernsey, who has zealously promoted the cultivation of thi valuable vegetable :—

In compliance with your request, I hee give you a short statement in relation to the Arum introduced by me into the island, and which I have been cultivating for the last seven years. It first came under mynotice through the means of a plant brought in a pot from the Azores, and given to brother-in-law of mine, as a plant producing the arrowroot. The first sight I hadof it persuaded me at once that it belonged to the arrow tribe, and I at once determind to try its powers of enduring our climate; and the result has been that I have foud it perfectly hardy, bearing well the severest of our winters. Growing, however, th winter through, it required the shelter of a walled garden, or land otherwise proteced from high winds, which break the leaves and thus retard its growth.

The digging of the crop and the replnting takes place at the end of July or commencement of August. It might bedone simultaneously, the smaller bulbs being planted as they are separated from te larger ones destined for arrowroot. They, however, can remain out of the grund for some weeks—a longer time if kept quite dry.

In planting, I have, after repeated tals of various modes, adopted the following. I dig a trench as for potatoes, but levellig the bottom with the spade, so as to have a level surface of about six inches in breath and as much as possible of uniform breadth; then drop into this furrow very thicky the small bulbs. These latter, though not attaining the size of the larger ones, vill yet acquire a respectable size. I lay them thick for two reasons: one is that man of the bulbs will not grow the first year, and the second is that it has become evidet to me that the bulbs, in increasing their size. require the assistance of each otherto get the better of the pressure of the soil,

which, after winter rain, gets hard. Between each row I leave a space of eighteen inches, or, when I plant in very rich soil, two feet.

The bulbs so planted, I leave two years before taking them up. A crop may, however, be obtained yearly by planting bulbs of the size of a good-sized egg ; but I prefer the other mode. At the second year, the plants not having been disturbed, are up much earlier, and become much finer and healthier plants than those planted one year for the other, and produce much finer bulbs for the next planting.

To obtain a first-rate crop the soil needs to be rich and well manured. If this is done at the time of planting, the more rotten and decayed the manure is, the better. If, however, you prepare your soil early the previous spring, you can turn in manure in its ordinary state. The manure in all cases is spread upon the soil and forked in.

This plant seems to delight, like our common Arum, in rich vegetable mould; and, like it, seems to do best in large clumps or close patches. This was what first suggested to me the propriety of planting thick.

The produce of this plant is enormous—from 1½ perch I manufactured one year 60lb. of arrowroot, which I sold at the rate of 1s. per pound, being at the rate of 78*l.* per Guernsey vergée, or 193*l.* sterling the English acre. This was planted with bulbs the size of an egg, in rows 1 foot apart and 3 inches in the rows.

That was a remarkably good year for bringing the plants to perfection ; I have never succeeded so well since. It has never failed, however, in paying me well for the ground it occupied, and the labour required by it.

In some years it has been attacked with a disease peculiar to the plant. Early in spring I have found the leaves and stalks acquire a rusty appearance, and this gradually spreading, until the plant disappeared altogether. On digging the bulb, it was perceived that it had stopped its sweling from the time of attack.

I have observed this same disease in the common Arum, and in another Arum named *serpentaria*, which I have also in my garden.

With regard to the extraction of the fœcula, this operation is performed just in the same way as potato-starch is obtained, and therefore does not need any particular explanation here.

There resides in this Arum, as well as in the common Arum of our hedges, an acrid principle, which would make it very dangerous if eaten in its undried state. By drying, however, its poisonous qualities entirely disappear by evaporation, and in this state it becomes really superior to the potato. This has led me to believe that if this root was kiln-dried, it might afterwards be stored and used as potatoes the winter through. I have not yet, however, made the experiment, save with a few roots dried before a fire, and so far proving perfectly successful. This acrid juice becomes very troublesome to those who are occupied in manufacturing the arrowroot—it causes a most intolerable and itching sensation to the hand, and especially between the fingers. Oil of any sort, but particularly oil of cloves or sweet oil, rubbed over the hand soon allays this otherwise unpleasant, if not painful sensation By great care in avoiding to dip the hand in the water, much of the evil may be averted. Most of the work may be done with instruments having handles.

The above comprises most of the particulars relating to this plant, and to its cultivation and produce. Should you, however, at any time need any further information which will be within my power to give, I shall most readily and gladly furnish you with it.

Yours very sincerely,

PETER MARTIN.

As the season for digging and replanting the bulbs had passed when Mr. Lowe visited Guernsey, the inception of the experiment in England had to be deferred for a year. He brought back, however, a few bulbs, and a specimen of the plant, and these were planted in the garden of Mr. Bush, the Treasurer, who reports that they have survived the frosts of winter, and are now apparently strong and healthy. In order to enable the Society to conduct the experiment upon a scale of sufficient magnitude when the proper season for planting arrives, Mr. Martin will send from Guernsey a good supply of the bulbs.

It would be improper to close this Report without making some allusion to the loss which the Science of Acclimatisation has sustained during the past year, in the person of M. Geoffroy de St. Hilaire. As the founder and organiser of the French Société Impériale d'Acclimatation, M. de St. Hilaire conferred incalculable benefit upon his country, and has created for himself a name which will be honoured to the end of time.

In conclusion, it must be admitted that, although the steps of such a Society as this are necessarily slow at first, and although the experiments are in their nature tardy of development, the progress which has been made during the past year is marked and satisfactory. Several experiments of great prospective value are now fairly in progress with every prospect of success, and channels for commencing others of still greater importance have been opened. The Council, however, would urge upon the members and upon the public at large this consideration, that these experiments cannot be conducted without adequate funds, and that before operations of any importance can be projected upon a scale worthy of the great objects of this Society, there must be a considerable increase in the number of subscribing members.

The system upon which the Society is arranged may now be said to be in good working order, and opportunities are offered for conducting experiments of the highest importance, if the means of bearing the expense are provided. It must be remembered, that, in bringing over Mammals, Birds, and Fishes from abroad, not only must the original cost and expense of transport be borne by the Society, but it is also necessary to offer rewards to the ships' officers who take charge of the creatures during the voyage, as an inducement to give their zealous co-operation. Moreover, the Council wishes to impress upon the Members the necessity of taking, on behalf of the Society, premises in some part of the country suitable for the purpose, where the experiments may be conducted, so that the Society may not be entirely dependent upon the private liberality of its Members. The Council looks forward indeed with confident expectation to the time when the Society will, like the French Société Impériale d'Acclimatation, number its Members by thousands, and possess gardens and other appliances for the conduct of

its operations similar to those which that Society is fortunate enough to possess. As a step to this state of things, the Council calls upon all who take an interest in the objects which the Society endeavours to promote, to do their best in increasing the number of Members, not doubting that the Council and Officers to be elected for the coming year will use their utmost ability to carry on the business of the Society with an increase of vigour proportioned to the increase of means.

By order of the Council,

FRANCIS T. BUCKLAND, M.A. (2nd Life Guards),
JAMES LOWE,
} Secretaries.

DONORS AND LIFE MEMBERS.

Breadalbane, The Marquis of, 21, Park-lane. W.; Taymouth Castle, Perthshire	£10	0	0
Berkeley, The Hon. Grantley F., Winkton House, Ringwood, Hants	10	0	0
Baker, S. W., Esq., Hanson & Co., Constantinople	10	0	0
Biggs, Dr., Templemartin Glebe, Brandon, co. Cork	1	0	0
Burr, Higford, Esq., Aldermaston, Reading	10	0	0
Coutts, Miss Burdett, Holly Lodge, Highgate	500	0	0
Chamberlayne, Thos., Esq., Cranbury Park, Winchester	10	0	0
Chantrey, Lady, Claridge's Hotel, Brook-street. W.	10	0	0
Craven, The Earl of, Combe Abbey, Coventry, Hamstead and Ashdown Parks, Lambourne, Berks	10	0	0
Crockford, John, Esq., 346, Strand. W.C.	10	0	0
Damer, Capt. S. Dawson, M. P., 2, Chapel-street, Grosvenor-square	10	0	0
Elliott, John Bardoe Bowes, Esq., Deebank Banchory, Aberdeen	10	0	0
Gage, The Viscount, 4, Whitehall-yard. S.W.; Firle Place, Sussex	10	0	0
Hill, Viscount, Hawkstone Park and Hardwick Grange, Shrewsbury	10	0	0
Leslie, Col., 43, Berkeley-square	10	0	0
Newcastle, The Duke of, 17, Portman-square. W.; Clumber Park, Worksop	10	0	0
Nix, Edward Ward, Esq., 77, Lombard-street. E.C.	10	0	0
Powerscourt, The Viscount, 1st Life Guards	10	0	0
Penruddocke, Charles, Esq., Compton Park, Salisbury	10	0	0
Southampton, Lord, Whitebury Lodge, Towcester	10	0	0
Scott, William, Esq., Messrs. Jones and Co., York-street, Manchester	5	0	0
Sotheby, Mrs. S. Leigh	10	0	0
Stone, John, Esq., Ashton Villa, Wickham-road, Upper Lewisham-road. S.E	10	0	0
Tredegar, Lord, 32, Portman-square. W.; Tredegar Park, Abergavenny, Monmouthshire	10	0	0
Wilson, Edward, Esq., Argus Office, Melbourne, Australia	10	0	0
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ACCLIMATISATION SOCIETY.

Cash Account

FOR THE YEAR ENDING MARCH, 1862.

RECEIPTS.	£	s.	d.
Balance in hand as per former Account	586	15	0
Donations	86	6	0
Subscriptions	84	0	0
Remittances for *Dioscorea* Roots	5	10	0
Returned Postage Stamps (*Field*)	0	10	0
	£763	1	0

DISBURSEMENTS.	£	s.	d.
Secretary	50	0	0
Printing Circulars, Report, &c.	43	14	11
Paid for Birds, Beasts, Fish, and Vegetables	168	2	3
Office Disbursements	31	15	0
Clerk's Salary	16	5	0
Rent	8	15	0
Aviary, &c.	10	18	6
Guernsey Branch Expenses	5	0	0
Incidental Expenses	5	16	0
Balance	422	14	4
	£763	1	0

JOHN BUSH, *Treasurer.*

Examined and found Correct,

JOHN CROCKFORD,
C. S. TOWNSHEND, } *Auditors.*

12*th March*, 1862.

ACCLIMATISATION SOCIETY

OF

GRIAT BRITAIN, IRELAND, AND THE COLONIES.

THIRD ANNUAL REPORT.

1863.

THIRD

ANNUAL REPORT

OF THE

Society

FOR THE

ACCLIMATISATION OF ANIMALS,

BIRDS, FISHES, INSECTS AND VEGETABLES

WITHIN THE UNITED KINGDOM.

1863.

OFFICES:
3, DUKE STREET, ADELPHI, LONDON. W.C.

LONDON:
PRINTED BY JOHN CROCKFORD, 346, STRAND.

SOCIETY FOR THE ACCLIMATISATION

OF

Animals, Birds, Fishes, Insects and Vegetables

WITHIN THE UNITED KINGDOM.

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RULES.

I.

The purposes of the society are—

1. The Introduction, Acclimatisation, and Domestication of Mammals, Birds, Fishes, Insects, and Vegetables, whether useful or ornamental.
2. The Perfection, Propagation, and Hybridisation of races already domesticated.
3. The Spread of Indigenous and Naturalized Animals, &c., from parts of the United Kingdom where they are already known to other localities where they are not known.
4. The Procuration, whether by Purchase, Gift, or Exchange of Animals, &c., from British Colonies and foreign countries.
5. The Transmission of Animals, &c., from England to her Colonies and foreign parts, in exchange for others sent from thence to the Society.
6. The holding of Periodical Meetings, and the publication of Reports and Transactions for the purpose of spreading knowledge of Acclimatisation, and of inquiry into the causes of failure.

II.

The Society is to be controlled by a Council to be elected annually, consisting of not less than twelve Members and the Officers of the Society *ex officio*. The functions of the Council are to determine what are the operations to be carried out; to recommend to the Society such alterations in the Laws as may seem necessary, and to make Reports to the Members of the Society upon the progress of the operations. The Council shall have the power of extending its number to Twenty, by electing Members of the Society who are most likely to further its interests. The Council to meet on the first Wednesday of every month, and five shall be a quorum.

III.

The Annual Meeting of the Members will be held on the first Wednesday in the month of May in each year, to receive the Report of the Council and elect the Council and Officers of the Society for the ensuing year.

IV.

The Annual Subscription of the Members is 1*l.* 1*s.* A Donation of 10*l.* entitles the Donor to a Life Membership. The Annual Subscriptions are due on the first of January in each year for the current year, or within one month of becoming a Member. When Subscriptions are left unpaid after the period fixed for the payment of the same, or for one month after application for the same has been duly made, the defaulting Subscribers may be dismembered by the Council.

V.

Persons desirous of becoming Members must signify the same by a letter to the Secretaries, and the letter must be countersigned by two Members of the Society. If no valid objection be urged in the interim, it shall be competent for the Council at its next or any subsequent Meeting to declare such applicant a Member.

VI.

None but Members shall be entitled to purchase of or through the agency of the Society any Animals, Birds, Vegetables, &c.; and the Animals, Birds, Vegetables, &c., belonging to the Society shall be entrusted to the care of Members only. The Annual Report and all other Report and Circulars issued by the direction of the Council shall be delivered to Members free of expense.

VII.

That when any Animals, Birds, Vegetables, or other objects for experiment, are entrusted to Members for experiment and multiplication, two-thirds of the produce shall be the property of the Society, and one-third of the Member to whom they shall have been so entrusted; and that upon the delivery of such Animals, &c., to any Member for such purposes as aforesaid, a memorandum to that effect shall be signed by the said Member and by the Secretaries, on behalf of the Society; and the said Member shall undertake to render an account of the produce to the Society, whenever called upon to do so, and to give up to the Society the share of the produce due to the Society. Provided always that the Council shall have power to modify this Rule at their discretion, and to make special agreements, so as to meet the circumstances of any particular case.

VIII.

All expenditure of Funds shall be under the control of the Council.

IX.

The Accounts are to be presented at the Annual Meeting, audited by two Auditors, to be appointed by the Council.

X.

Any Member who shall refuse to obey these Rules shall *ipso facto* cease to be a Member of the Society, and shall lose all right to any of its property, and the vote of a majority of the Council shall be a sufficient confirmation and declaration of the same.

Remittances may be made by Post-office Order or Cheque, addressed to JOHN BUSH, Esq., Treasurer, 3, Duke-street, Adelphi, W.C.

THIRD ANNUAL REPORT

OF THE

ACCLIMATISATION SOCIETY,

APRIL 29, 1863.

TO THE MEMBERS OF THE ACCLIMATISATION SOCIETY.

THE Council has great pleasure in submitting to the Third Annual Meeting of the Society an account of the proceedings of the Society during the past year.

In the first place, the Council has to congratulate the Members upon the favourable and improving state of the Society, as contrasted with its position last year. At the period of the last Annual Meeting, the constitution of the Society was as follows :—

Life Members	24
Annual Subscribers	48
Total	72

At the present time, the Society consists of :—

Life Members	46
Annual Subscribers	139
Total	185

Showing a clear increase during the year of more than 135 per cent. upon the number of subscribing Members. So considerable an addition to the ranks of the Society cannot be regarded otherwise than as a proof that its efforts are appreciated by the Public.

As regards the pecuniary state of the Society, the Treasurer will present his Report, from which you will find that the working of this Society has been carried on at the minimum of expense and with a due regard to economy, and that, in addition to the property in live stock which the Society now has in hand, and also to

the sum of £150 now being expended in Australia for the benefit of the Society, and of an unascertained balance in the hands of Messrs. Matheson and Co. (on account of Chinese sheep), the Society still finds itself in the satisfactory position of having a balance at its Bankers of £488 18*s.* 6*d.*

During the past year the Society has experienced a great loss in the death of its lamented President, the Marquis of Breadalbane, and it will now become the duty of the Members to elect a successor to fill his place. The Council, having taken this matter into consideration, has communicated with one of our most honoured patrons, His Grace the Duke of Newcastle (to whom the Society is already so much indebted for his kind offices in recommending the objects of the Society to the Colonial Governors), with the view of ascertaining whether his Grace would be disposed to accept the Presidentship, in the event of its being offered to him. The Council has the satisfaction to announce that his Grace has returned a favourable answer to this question, copies of which answer are already in the hands of the Members.*

In reviewing the events of the past year, the Council cannot but reflect, with great satisfaction, upon several matters which serve to show that the efforts of the Society are appreciated not only by the public but by other societies and bodies whose labours tend towards the same direction. In June, 1862, four pens of the Chinese sheep and lambs were exhibited at the Show of the Royal Agricultural Society, held at Battersea Park, and the Judges awarded to the Society, on their account, two bronze medals.

At the last Annual Meeting of the French Société Imperiale d'Acclimatation, held on the 10th of February, two medals were awarded by the Committee of Rewards to two of our Members; viz., a silver medal, of the first class, to John Bush, Esq., the Hon. Treasurer, for the services which he has rendered in cultivating and rearing the flock of Chinese sheep, and the other services which he has rendered to the cause of Acclimatisation; and a bronze medal, of the second class, to Viscount Powerscourt for his successful cultivation of various breeds of deer.

The success which attended the Commemoration Dinner of the Society, held on the 12th of July last, afforded an excellent proof of the interest which the public takes in the operations of the Society. By the kindness of several of the foreign and colonial commissioners and exhibitors at the Great International Exhibition, then being held, the Council was enabled to place before the Members and guests samples of many natural products which do not often find their way to our tables, and some of which might be advantageously introduced into this country. The following account of this dinner (abbreviated from the *Field* newspaper of the 19th July,

---

* At the Annual Meeting His Grace the Duke of Newcastle was unanimously elected President of the Society.

1862) will serve to put on record what took place on this occasion :—

The first annual celebration dinner of the Acclimatisation Society was held on Saturday, the 12th of July, at Willis's Rooms, King-street, St. James's. The Right Hon. Lord Stanley, M.P., was in the chair, supported by the Duke of St. Albans, Lord Powerscourt, Lord R. Grosvenor, Hon. Grantley F. Berkeley (vice-chairman), Sir Claude Scott, Lord Tredegar, Sir H. Young, Lord Digby, Sir W. Holmes, Sir J. Heron Maxwell, Lord Hamilton, Hon. Stuart Wortley, Hon. C. Fitzwilliam, M.P., Lord Loughborough, the Vicomte Murat de Sistrières, Earl of Pomfret, Capt. Dawson Damer, M.P. (vice-chairman), M. Aubrey le Comte, Dr. Günther, &c., &c.

The room was decorated with a variety of interesting objects illustrative of the objects of the Society. The most remarkable of these were the enormous deer-horns belonging to Lord Powerscourt; magnificent heads of the bison, the wild boar, and the eland; stuffed specimens of the prairie grouse, the ruffed grouse, the guan, and the curassow; some fine stuffed specimens of *Lucioperca*, and a case containing the little swallow which builds the edible birds'-nests, with a specimen of the nest and an egg. This was handed round to the guests when the soup produced from the nests was under discussion, and afforded an interesting corollary to the culinary lesson which the Society was illustrating with plates.

[Here follows an account of the various dishes and rarities which were offered, in addition to the usual *agrémens* of a public dinner, especially of the birds'-nest soup, of China; the tripang soup, of Japan; *potages* of Nerfs de Daim and of Semoule; kangaroo steamer, from Australia; pepper-pot, from the West Indies; Poulette en Karic à la Siamoise; Riz de Veau à l'oseille de Dominique; kangaroo ham; Syrian pig; Canadian goose; guan; curassow; the Hon. Grantley Berkeley's pintail ducks; Honduras turkey; dusky ducks; leporines, and other delicacies. Of the Chinese lamb (one of which was roasted whole, and was intended to illustrate the accomplishment of one of the objects of the Society), the writer declared that it was "pronounced to be of admirable flavour;" and of the *dioscorea batatas*, or Chinese Yam, he stated that it was "much approved of; the flavour is very delicate, and resembles good mashed potato." A good account was also given of the Australian wines, samples of which were generously provided by Sir Daniel Cooper, Sir Redmond Barry, and L. Mackinnon, Esq.; and the speeches made upon the occasion by Lord Stanley, the Hon. Grantley Berkeley, E. Wilson, Esq., Captain Dawson Damer, and others, concluded the report.]

We now proceed to notice in detail the operations of the Society during the past year, and to extract such parts of the reports supplied by Members of the experiments which they have had in hand as seem worthy of being put upon record.

Mammals.

CHINESE SHEEP.

The progress of the flock of Chinese Sheep has been decidedly satisfactory, as the following statement will show :—

In January, 1862, the Society received from Shanghae (per favour of Messrs. Matheson and Co.), 5 ewes and 2 rams, and in March following, 6 ewes, 2 rams, and 6 lambs; total, 21. Some of these have been sold and distributed to Members, and a sufficient stock

has been kept on hand for the multiplication of the breed. Casualties have happened, especially among the lambs, and one lamb was killed for the dinner; but the account of the flock stands at present thus :—

In Possession of	Rams.	Ewes.	Lambs.	Total.
John Bush, Esq., the Hon. Treasurer	1	3	7	11
Société Imperiale d'Acclimatation	1	1	1	3
Viscount Powerscourt	1	2	5	8
Lord Walsingham	1	2	5	8
Rev. J. Huyshe	—	1	—	1
C. H. Prichard, Esq.	1	1	2	4
Mrs. Leigh Sotheby	1	1	3	5
David Lumsden, Esq.	1	1	1	3
Total Flock of pure Chinese Breed				43

In addition to these, several Members have tried the experiment of crossing the Chinese sheep with other breeds, with the view of ascertaining whether the sheep maintained their fecundity under such circumstances. The following results, among others, have been obtained :—

	Experiment.	Lambs.
Viscount Powerscourt	1 ram with 2 Wexford ewes	..... 4*
Lady D. Nevill	1 with 10 Southdowns	1 ewe had 3 2 „ „ 2 .... 14 7 „ „ 1
David Lumsden, Esq.	1 with 2 Brittany ewes.....	 2
John Bush, Esq.	1 with 4 Oxfordshire Downs	others expected 3 ewes had 2 1 „ „ 1 ... 7
J. J. Stone, Esq.	1 with 11 Southdowns	8 ewes had 2 3 „ „ 1 ... 19 The latter were only lambs of last season.
		Total lambs ... 46 from 25 ewes.

These facts clearly show that the fecundity of the Chinese breed belongs at least as much to the ram as to the ewe, and that it is preserved, even when crossed with other breeds usually less fecund.

* From the report of Mr. Robertson, on behalf of Lord Powerscourt (subsequently given), it will be seen that this represents but a very small part of the experiments in crossing conducted by his lordship, and the results of the same.

We subjoin a few extracts from some of the reports received from the Members who have conducted these experiments:—

MR. ALEXANDER ROBERTSON, FOR LORD POWERSCOURT.

"The Chinese sheep still preserve their prolific character even by crossing. *They have never less than two lambs, sometimes three, and on one occasion four at a birth.* We have now, in all, eleven lambs, the cross being very perceptible in two, more especially about the head and ears, the wool being also of so fine a texture. In still further experimenting, we shall reverse the cross, *and if the animal still preserves its prolific disposition, I fully expect, by judicious crossing, they will ultimately prove a useful and paying breed.* There is, however, one great drawback, which I have not as yet overcome, namely, their disposition to have tender feet. I have applied every known remedy, changing them to different runs, dressing with the most approved compositions, still without success, and would be glad to know the Society's experience in this matter. I ought also to say the lambs show the same symptoms when they are a month old.

"The Chinese cross we now have is Irish Ewe and Chinese Ram; the next cross, Chinese Ewe and Irish Ram, and so on."

C. H. PRICHARD, ESQ.

"I have two lambs from my Chinese Ewe born on the 9th of April; they are healthy and promise well."

LADY DOROTHY NEVILL.

"This is not a good year for anything, but my Chinese sheep has bred with my own South Down ewes. One has had three, two have had two, and seven have had one lamb each. The Chinese sheep is looking very well, and all the lambs are doing well, and I hope soon to taste one."

MR. HENRY WOODS, FOR LORD WALSINGHAM.

"They are certainly good breeders, and good sucklers of their lambs; at least they are so when fed as highly as your lordship's have been. It is possible if they were worse fed they would not breed so fast, or suckle so well."

DAVID LUMSDEN, ESQ.

"I am disappointed at not receiving a few lambs from the pure Chinese ewe, and shall be glad to hear how other purchasers have succeeded."

JOHN J. STONE, ESQ.

"Eleven Southdown ewes were put with the Chinese ram, producing nineteen lambs, one of the same ewes having previously produced a lamb to a Southdown ram, so that she was actually in lamb to two rams at the same time. Some of the lambs are curiously coloured, and all are wonderfully healthy and thriving, promising to make large and heavy lambs as compared with the downs. I think this experiment will be one of great interest, as showing what influence the cross may have upon the fleece of the produce, that of the parents being so opposite."

The Council submits that the balance of the evidence of these facts warrants the belief that in the breed of Chinese sheep a solid and valuable acquisition has been made to the resources of the kingdom. Of course, as in the introduction of all novelties, there are difficulties to overcome which time and experience can alone be expected to conquer; but these, instead of disheartening, should serve to make the Members all the more assured of the necessity for a Society whose main object is to overcome difficulties and

discover remedies for the drawbacks which seem to oppose the objects which it has in view.

DEER.

Great progress has been made by Lord Powerscourt during the past year in his interesting experiments with various breeds of deer. We subjoin some extracts from an interesting report by his Lordship on the subject :—

LIST OF FOREIGN HERDS OF DEER AND OTHER ANIMALS NOW AT POWERSCOURT.

SAMBUR DEER.—Seven hinds and one stag, turned into the park last year All the hinds appear heavy in calf.

JAPANESE DEER.—A pair bought of the Zoological Society, looking in full health, and the female heavy in calf.

SARDINIAN MOUFFLON, OR WILD SHEEP.—A pair turned out into the park in 1861. Had a lamb (unfortunately a ram) in 1862. The female again in lamb now.

ROE DEER, from Germany.—Turned out this month (March, 1863), and doing well.

WAPITI DEER.—One male rising 5 years old, one male rising 4 years, one female rising 3 years. Not in calf. "I think (writes his Lordship) the reason of the Wapiti not thriving so well as they might, has been the extreme wetness of the past winter. They always look their worst at this time of year, when they drop their horns. I suppose the exertions of nature in casting off the old horn and beginning to form the new one is the cause, as when the horn once starts growing, they appear to mend in condition. But they will not do without artificial nourishment; grain alone is not enough, except in the height of summer.

"The animals I have tried, and which have failed (as I wished for nothing but animals which would, when established, take care of themselves, and not be kept in a glass case), are the Eland, the Nylghaie, the Axis Deer, and some others. The climate of Ireland is, I think, too damp for the Antelope tribe, as I had two pairs of Nylghaie, all of which died sudden deaths from the wet and cold of the climate, the animal being apparently healthy in the evening, and in each case, being found dead next morning. These Nylghaies were all examined after death, and the only verdict given by a medical man was slight congestion of the lungs, and death from the excessive wet. My experience is, that many of these animals will bear a very great amount of dry cold without harm, but wet, *continual* wet, as is proverbially the case in Ireland, makes it an unfavourable climate for experiments with tropical animals. It stands to reason, as far as I see, that the Eland, an animal inhabiting, in his native country, dry, sandy deserts, and able to live without water for days and weeks, and having a capacity of containing his supply of water like the camel, is an animal difficult to accustom to a climate where it rains four days in the week! But still, I have very little doubt that by perseverance and great expense and trouble, great results may be obtained, and I only hope and trust that some day either that splendid animal or some other, with as great a promise of producing meat for the country, may be successfully acclimatized. At present, I look upon the Eland as a hothouse plant—he is nothing more in this country, and I must say that, unless by crossing with our native cattle, I do not see my way to making him a household beast. But *nil desperandum*, and nothing is done without trying.*

---

* The experiment was tried of crossing the Eland with two cows belonging to Lord Gage, but no hybrid was obtained.

"The Nylghaie, a still more delicate animal, as far as I have seen them, is less notable in its profitable qualities, though also a fine meat-producing beast, but its excessive wildness and savageness precludes any close handling.

"With me, the Wapiti would also suffer, were it not for a comfortable house always open to them, and which they always take advantage of in wet weather. The Sambur likewise are fond of shelter, and it is interesting to see these beasts preserving exactly the habits they have at home in this country. I mean that as in their own jungles, where I saw them, they skulk all day, and retreat from the power of the sun, coming out at dusk to feed and drink. They do exactly the same with me in Ireland; in the daytime it is very difficult to find one of them, they crouch and lie so close, but the keeper tells me he sees them come out at dusk and feed in the opens, and go down to the river to drink. The Japanese deer have the same habit.

"The Moufflons live in the rocks of which there are luckily plenty in the park, preferring the most inaccessible spots to rear their young. I always feel a certain satisfaction when I walk or drive or ride through the park with any friend, that at any moment he may see jump out of the fern, or in the long tangled heather, either the sharp muzzle and beautiful large eyes and round ears of the Sambur, or the thick ram horns of the Moufflon, to vary the monotony of the eternal fallow deer and red deer.

"I am getting over a number of red deer from Prince Lichtenstein's country at Eisgrub, near Lundeburg, in the country between Vienna and Prague. The heads I saw at Vienna determined me to try the experiment of transporting them."

Birds.

The species of Birds with which experiments have been made during the past year are chiefly Prairie Grouse, Honduras Turkey, Virginian Quails, and Japanese Poultry. The following reports have been received:—

THE HON. GRANTLEY F. BERKELEY, V.P.

"The male and female Prairie Grouse bred last season, and there are two young ones doing well. . . . The old male is now perfectly tame. . . . The facts are thoroughly decided in regard to these beautiful and useful birds of game. First, that they are easily acclimated. Secondly, that when caught wild and imported they will breed in confinement *more readily* than our English hen pheasant, and that they will make a nest in confinement, sit, hatch and rear their young. Having taken her own eggs away from the hen bird last season, and substituted the eggs of pheasants, the Prairie Grouse hatched two and reared them in the garden, a proof that there are insects in England, and other food, which the grouse recognises as a healthy substitute for that she was used to in America. The grouse feeds sparingly on yellow maize, will occasionally eat very thick barley meal pudding, the chief food being grass, and, in spring, any buds or bloom within their reach. The young grouse are very fond of ants and maggots, and they will take very well to ants' eggs, and they like small red worms. In the garden where these birds are, they denude all the lower branches of the wall fruit of their buds, and feed with great relish on the pear blossom as it falls.

"To owners of manors and preservers of game then, I can now safely point out a new game, which, *reared under hens from eggs laid in aviaries, and bred and enlarged upon the spot to which it is desired that they should take to*, will make a splendid addition to the bag and to the table.

"In regard to the American Quail, they also will do very well, care being taken to rear the young birds, and to let them then and there inhabit the

spot where it is desired that they should remain. To hatch them or the grouse in one place and to turn them down in another is fatal to the experiment, it is *the rearing and first association with the locality of home that gives to the bird the desire to stay.* Without attention to this apparently trivial, but really *all important, fact* all trouble and cost are in vain.

"With the *Brazilian Geese* from the hottest portion of that country, as far as acclimatisation goes, I have also completely succeeded. The winter has certainly been in their favour, and through it they remained in perfect health. During the winter, from their having been insufficiently pinioned, one of them flew out of the garden and joined other wild fowl on the river. He would not, however, leave his mate, but came back to her, and haunted the spot until we recaptured him. They are now perfectly tame, and the most graceful and interesting beautiful little things imaginable. Their food is boiled rice slightly peppered, yellow maize, of which they are very fond, a few grains of barley, and a very little bread. They like wading in shallow, muddy water, and feeding on insects, and their note is a sweet warbling kind of whistle. In cold weather, they liked resting in a sheltered, sunny corner out of the wind, and in water over their feet; but since the warmth of spring their nature here is to seek the shady side of the garden, and to sit there beneath a low thick laurel tree. If I make them leave it for the warm sun, they will return to it, and from this I gather that *they do not really find our sun too hot*, but that in their own country the sun necessitates their seeking shade at hand; they do so from the force of habit or instinctive reasons not yet broken through. I have every reason to hope that from these lovely little brown and black geese I may succeed in obtaining eggs. At Hornby Castle, Savage, the head-keeper, tells me his American Quails are laying well.

"The now thoroughly established domesticated Pintailed Duck, bred originally from the wild Pintail Mallard and tame Duck, and then back to the Pintail twice or thrice over, till all tame appearance was lost, and the long tail completely acquired, is doing well. There is a flock of them on the lake at West Wycombe Park, where, if care is taken of them, they ought to be still breeding. There is also on the same lake, two pair of the cross with the Pintail and North American Dusky Duck, most beautiful and strangely wild-looking birds, who I have no doubt will breed again, and there is a pair of the real Dusky Duck, whose intentions, when I last saw them, seemed to be to breed.

"With me the crosses between the Pintail and the Muscovy Duck, and the Muscovy Drake and Aylesbury Duck, are of immense size, and all the ducks with nests. This cross is excellent for the table, and perfectly fecundite, and I recommend it to any man who has a farmyard, or anything like a duck-pond at command. I have also doing well, and in beautiful condition, a pair of the Wood Ducks of America, obtained by Mr. Bailey, of Mount-street, and presented to me by Lord Craven; and the little Bahama Drake, given to me by Lady Winchester. This bijou of a bird is doing well at present with a small White Call-duck. In another water avairy a Scaup Drake is paired with a female Pochard, but what will come of this last attempt at a cross I do not know."

John Bush, Esq.

A Honduras Hen Turkey laid twenty eggs, and hatched out nine young birds, which went very well for some time, but the lateness of the season, cold and damp, eventually killed them off.

April 13th, 1863.—Hen Turkey setting on fifteen eggs, laid since March 10th.

Lady Dorothy Nevill.

"We had no male Virginian Quail. The females were placed with the Californian males; but although they had about thirty eggs each, they were all unfruitful. This year we have a male Virginian Quail, so we may hope for better success. The Californian Quails had about forty eggs each, but owing to the lamentable summer, and not having setting hens, we brought up but few. One Californian hen set on her own eggs and brought out four, and proved an excellent mother."

A pair of Japanese Fowls, presented by A. D. Bartlett, Esq., and now under the care of Mr. Bush, have passed the winter in his aviary, and are now laying. It is to be remarked that their eggs are of a deeper colour, and are rounder than those of the Cochin-China fowls.

In December of last year the Council received from Sir George Bowen, Governor of Queensland, a letter, in which His Excellency announced that he had shipped on board "The Montmorency" a pair of *Talegellas*, or Scrub Turkeys, as a present to the Society. On the 24th of that month, the Secretaries received intelligence of the arrival of that vessel in the Docks; but on repairing on board, the birds were not forthcoming, and, on inquiry, a certificate was obtained, signed by the master and mate of the ship, that the birds had been washed overboard, during a storm, off Cape Horn. Through this misfortune, these valuable birds were lost to the Society, and the kindness of Sir George Bowen frustrated. The Council is of opinion that if it were more generally known among the officers of the Merchant Navy that the Society is willing to give suitable pecuniary rewards to the persons who take charge of and deliver safely whatever may be confided to their care on behalf of the Society, the chances of such an accident as this might be rendered more remote.

Postscriptum.—Since the presentation of the Report at the General Meeting, the Society has received, through the kindness of Robert Marshall, Esq., of the Royal Mail Steam Packet Company, a pair of the *Psopheo Crepitans*, Agamia, or Trumpeter Birds, from Central America. These fine birds, which are expected to breed well in this country, are easily domesticated, and become attached to the human race in a most extraordinary manner. In their own country, they will trustily watch a house, like a dog, and they give warning of danger by an arrangement in the windpipe which enables them to give forth a trumpet-like sound—whence the name. The Trumpeter Bird may also, it is said, be trained to watch a flock of poultry, and even to shepherd a flock of sheep. It possesses great courage, and is beautiful in form and colour.

Also since the General Meeting, the Secretaries have received from Melbourne the following advice as to the first consignments to be expected in return for the £150 previously alluded to:—

Acclimatisation Society's Office,
Melbourne, March 25, 1863.

GENTLEMEN,

I have now the honour to wait upon you with the following progress report:—

Immediately upon receipt of the 150*l.* placed by you in our hands, measures were adopted to secure the animals requested by you; and although we have not succeeded so far as could be wished, yet we have made some progress in our attempt. By the "Swiftsure," sailing on the 28th inst., will be sent a cage containing fourteen Bronze-wing Pigeons; by the "Moravian," sailing on the 31st,

will be sent seven Wonga Pigeons and six Bronze-winged Pigeons. We have likewise secured THREE PAIRS of Wombats for you, which will be sent by an early ship, although captains are rather chary of taking these large animals. We hope to procure a supply of Murray Cod within a month, of which, however I will advise you more fully in my next.

I have the honour to be,
Your most obedient servant,
THOMAS BLACK,
Acting President.

To the Secretaries, Acclimatisation Society, London.

Arrangements have also been made with persons in Norway to send over in the proper season a plentiful supply of the Reiper, or Norway Grouse, a useful and likely bird of game.

Fish.

Correspondence has been proceeding with Dr. Genzik, of Munich, and with Mr. Lloyd, of Hamburg, as to the importation of *Lucio-perca*, but as yet nothing has been done, although from the promises made by Mr. Lloyd, and the arrangements entered into with him, the arrival of the fish may be expected. Various offers have been made by Members of pieces of water suitable for the reception of the fish on his arrival, especially one by S. Gurney, Esq., M.P., who has a large sheet of water at Carshalton extremely well-fitted to harbour the fish.

From Mr. Black's letter, just given, it will be perceived that consignments of the Murray Cod are to be expected, and the Council also purposes to import for experiment specimens of the Mountain Mullet of Jamaica, of which great expectations may be entertained.

In furtherance of that purpose of the Society which is thus described in the laws—"The Spread of Indigenous and Naturalized Animals, &c., from parts of the United Kingdom where they are already known to other localities where they are not known," Mr. Buckland has instituted a series of interesting and valuable experiments connected with the artificial hatching of Salmon, Grayling, Trout, Char, Ombre Chevalier, Danube Salmon, Perch, and other fish. Through the liberality of M. Coumes, the superintendent of the French Imperial Piscicultural Establishments at Huningue he experienced no difficulty in obtaining an abundant supply of fecundated ova, and by his experiments publicly carried out in the *Field* window, at the Royal Institution (where he delivered a lecture on the subject on the 17th of April last, which will shortly be published in an extended form), at the *soirée* given by the President of the Royal Society on the 28th of March, at several scientific meetings, and on various other occasions, as well as by letters and articles on the subject in the *Times*, *Field*, and *Queen* newspapers, he has succeeded in attracting an amount of public attention to the subject which never was directed to it before. It is hoped that these efforts will bear abundant fruit, by causing the Science of Pisciculture

ture to be more generally studied, and by stimulating those who are interested in the salmon, trout, and other fisheries throughout the country to renovate those supplies of all-bounteous Nature which the greed and shortsightedness of man have, in many cases, so nearly exhausted.

In the course of his experiments, and by the aid of facilities placed at his disposal by the Wenham Lake Ice Company, Mr. Buckland discovered that salmon ova might be frozen in ice for a hundred and thirty-five days, and yet retain their vitality. This fact seems to solve the problem of how to transport salmon to Australia and other distant parts of the earth.

Silkworms.

Last year, the Council reported upon the experiments which Lady Dorothy Nevill had conducted as to the cultivation of the Ailanthus Silkworm (*Bombyx Cynthia*). These experiments have been continued and with marked success. Mr. Buckland having paid a visit to Lady Dorothy Nevill's silkworm plantation at Dangstein, near Petersfield, Hants, published an account of what he saw in the *Queen* newspaper (February 28th, 1863), of which the following is an extract:—

Her ladyship has set apart a portion of her beautiful and well-ordered garden, and has planted it with the young Ailanthus trees, covering them over with a light canvas-made building, a precaution rendered necessary by the birds, who pick off the young worms. On entering this building, I saw, for the first time, the living worms; they were in the highest state of perfection, and really beautiful things to look at; not white-faced, pale-looking things like the common Silkworm, but magnificent fellows from 2½ to 3 inches long, of an intense emerald-green colour, with the tubercles tipped with a gorgeous marine-blue. Her ladyship pointed out to me how the Silkworms held on to the leaves; they cared nothing for rain, less for the wind. Their feet have greater adhesive powers than the suckers of the cuttle-fish, and their bodies are covered with a fine down which turns the rain drops, like the tiny hairs on the leaf of the cabbage. Many of them had made their cocoons—picking out snug, quiet corners—and were working away like diligent and useful weavers, as they are. Lady D. Nevill explained how readily and at what little expense they were cultivated, and that she had found a ready market for all the cocoons she could grow, a gentleman in Paris having offered to take all she could supply for French manufacture.

Lady Dorothy Nevill herself gives the following report of her experiments:—

"Of the Silkworms I have nothing at present to say, as they are not yet come out, but last summer I netted over three dozen trees, and placed 500 worms on them. They yielded 480 cocoons. A bird got under the net, and took off some before it was arrested in its mischievous career. No wind or weather seemed to hurt the worms, and we kept some of the later ones on the trees, when even the leaves were frost-bitten, but the worms did not seem to suffer. I have no doubt as to their hardiness. The three dozen trees, about five feet high, would have fed at least 2000 worms, if we had had them, as the more the worms devour the leaves the stronger the latter shoot forth."

These facts seem to establish not only the probability of cultivating

the Ailanthus Silkworm in this country, but the ease with which it may be carried out. The shrub itself grows hardily and abundantly in the country already, and it may be seen flourishing in several of the gardens of the metropolitan squares, notably Belgrave and St. James's. It will, indeed, live anywhere, and delights in poor and sterile soil; and where it lives the worms will live also. The Council cannot but think that the general introduction of this new form of cultivation would be most beneficial, as it could be carried out upon any, even the smallest scale, by every cottager or small landowner who has a garden, and a ready market may be found for the smallest parcels of cocoons. To ladies especially this operation may be recommended by the fact that they may, without the slightest hyperbole, grow their own silk dresses in their own gardens.

Vegetables.

DIOSCOREA BATATAS, OR CHINESE YAM.

The reports which have been sent in by Members who have undertaken the experiment of cultivating the Chinese Yam are very various in effect, and from these documents it appears (as was the case last year) that "persons who have essayed the cultivation have arrived at diametrically opposite conclusions."

JOHN BUSH, ESQ., THE HON. TREASURER.

"These I had planted in different ways, some in the manner of potatoes, others on the top of ridges, others in kind of wooden troughs; and again another lot in a trench, the bottom of which was covered with large slates. The results were that those in wooden frames totally failed, those on ridges are not yet dug, those in natural ground turned out well, but those on the slate bottom are of all the most encouraging, some of them having changed the long deeply penetrating tuber to a shape somewhat resembling a thick fleshy hand, with rudimentary fingers growing laterally; and I do not despair of being able to perpetuate this deformity. If so, the great engineering difficulty of getting in the crop may be said to be overcome. I intend this year to put some tubers into trenches (after the general method of planting celery), and as the soil is very shallow, with a hard gravel for substratum, which is not easily penetrated, I am sanguine in the expectation of getting an entirely new form. You are aware the French Society offers a reward for the first successful change of growth."

VISCOUNT POWERSCOURT.

"They have gone down deep into the ground, so as to make it very difficult to find them, but they are doing very well."

C. H. PRICHARD, ESQ.

"I planted, in March, 1862, forty very small tubers, weighing eighteen ounces; on the 10th of November I dug them, and the produce, as taken from the ground and weighed, was twenty pounds. I consider them a good vegetable for the table, and this year I have planted a large number. The small tubers I procured from Van Houtte, of Ghent. I also planted some of my own tubers, cut."

LORD WALSINGHAM.

"The Yam I have had many years, but never found its flavour much approved."

W. J. DAVIDSON, ESQ., OF RUCHILL, GLASGOW, N.B.

"Last year was so cold and wet that I do not consider the trial a fair one, and this year I am repeating the experiment. I am inclined to think, however, that the climate two miles north of Glasgow is not suited for the *Dioscorea Batatas*."

LADY DOROTHY NEVILL.

"The *Dioscorea Batatas* did admirably."

J. T. MORTON, ESQ.

"So far as my experiments with the *Dioscorea Batatas* went, the result was not satisfactory."

LORD MOUNTCHARLES.

"The *Dioscorea Batatas* failed almost entirely last season."

ROWLAND HUNT, ESQ.

"I am sorry that I cannot pronounce favourably of the Chinese Yam."

SIR TATTON SYKES.

[The report of the experiment in the Sledmere gardens is unfavourable, but concludes as follows:]

"The soil here is a cold, retentive, calcareous one, resting on a bed of clay, mixed with flints. This, combined with the many sunless, wet, and ungenial summers, may possibly account for the result."

REPORT OF DR. S. E. HOSKINS, F.R.S., HON. SEC. OF THE GUERNSEY BRANCH.

He described the means which H. O. Carré, Esq. (the Lieutenant-Bailiff of Guernsey), had taken to cultivate the Chinese Yam with perfect success. He had done it by deep trenching, and planting the tuber in the ridges. This rendered the digging up of the tuber comparatively easy. Mr. Carré found that this deep trenching benefitted the soil like manure, and by planting celery between the ridges the land was economised. Mr. Carré and other cultivators in Guernsey esteemed the yam as a most valuable substitute for the potato, and used it to fill up the gap between the end of the old stock and the new potato. Dr. Hoskins avowed his thorough conviction that, when properly cultivated and understood, the Yam would prove a most valuable vegetable, and might be brought to market at a price to compete with the cheapest.

REPORT OF THE GUERNSEY BRANCH TO THE PARENT SOCIETY.

"The question has arisen as to whether the *Dioscorea* can be cultivated profitably by the farmer, so as to render it a marketable commodity, capable of competing in price with the potato. It is alleged on the one hand that the necessary labour of trenching the ground would be too expensive in relation to such a crop. On the other hand, it is contended that frequent trenching is equivalent to a certain ratio of manuring, and, therefore, that trenching is not labour in vain. Mr. Carré, whose intention it is to continue the cultivation of the Yam, because it is not only profitable in itself, but because it affords an additional link in the rotation of crops, contemplates planting the trenches between the ridges with celery and leeks, or with both."

The Council is of opinion that the conclusion to be drawn from

these conflicting reports is identical with that which was enunciated last year, viz. "that no amount of failure can destroy the effect of a single instance of success; and that where one experiment has succeeded, there is every reason to believe that further investigation must lead to the discovery of the elements which will render success certain." The potato itself had to struggle for a long time against prejudice and inexperience, and it required centuries of cultivation before the tuber which Raleigh brought over from America became developed into the Regents, Flukes, Rocks, Reds, and Ash-leaved Kidneys of our tables.

From all that can be gathered on the subject, it appears that a rich but not too heavy soil is the best for the *Dioscorea*, and that the trenching method recommended by Mr. Carré is not only the best, but the most economical. Mr. Bush's plan of underlaying the trench with slate seems also worthy of consideration.*

ARROWROOT.

The Council has received the following reports relative to the Brazilian Arrowroot, mentioned in the last report; a stock of which was obtained from Guernsey, and distributed among Members.

John Bush, Esq.

"Planted rather a large quantity of these bulbs in different parts of the gardens—as nearly as I could following Mr. Martin's method of cropping—the plants came up well, stood the winter, and are now looking upon the whole healthy and strong; many have died or prematurely ripened. Those planted under trees have done much the best, from what cause I do not exactly see; it cannot I think be attributed to shelter, as I have some under a south wall. As the season for taking up has not yet arrived, I cannot speak as to increase or quality."

Viscount Powerscourt.

"The Brazilian Arum is a good crop. I shall try it on a larger scale next year."

Mr. Alexander Robertson, for Lord Powerscourt.

"Planted in the end of July, 1862; the ground previously well prepared by trenching, the manure thoroughly rotted and amalgamated with the soil. Came up freely and has stood the winter remarkably well. I shall report the produce

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* Even when the plant is grown in a satisfactory manner, it is still necessary to know how to cook it. It is to be feared that want of knowledge upon this point has in more than one instance led to an unfavourable judgment of the *Dioscorea*. It has been condemned as waxy, insipid, and as being like the parsnip; but when properly cooked it is none of these. The best mode of cooking it is to boil the large tubers until they are tender, strain off the water, and then set the vegetable in a vessel either in the oven or before the fire for several minutes. If served then, either plain or with butter, it will be found to possess all the best qualities of the potato.

when lifting the roots in July. As this plant grows throughout the winter, a walled garden, or some such shelter, is absolutely necessary, not so much to secure it from the frost as to preserve the foliage from the prevailing winds."

DAVID LUMSDEN, ESQ.

"Thriving well and stood the winter well."

The Council, not having received a single unfavourable report with regard to the Arum, feels itself warranted in pronouncing this experiment to be decidedly successful. Members who have cultivated this plant should bear in mind that the mode of preparing it for use is identical with that which is used in the case of Potato Starch. They should, however, bear in mind Mr. Martin's caution as to the acridity of the juice and his directions for obviating the same, for which see the last Annual Report, p. 25.

DOLICHOS UNGUICULATUS, ETC., ETC.

The parcels of *Dolichos Unguiculatus*, or Hook-podded Pea, and the *Phaseolus Limensis*, or Lima Bean (kindly supplied by Governor Darling, of Jamaica, and distributed among the Members), have not been successful, the wet and cold season of last year being obviously inimical to the success of any importation from such a climate as Jamaica. The following reports have been received.

REPORT FROM THE GUERNSEY BRANCH.

Late in the spring of the present year some specimens of the Hook-podded Pea and the Lima Bean, imported from Jamaica, were furnished to us by the Council and distributed among our Members. These seeds were planted in various situations; they most of them germinated, and grew readily at first; but they did not continue to flourish, owing, probably, to the lateness of the period at which they were sown, and to the comparative want of warm sunshine during the summer. It is true that some of the plants under the care of Mr. Dobree, of St. George, flowered and formed pods containing beans to a certain extent mature, as may be seen in the dried specimens which have been preserved for transmission to the Council. A fresh supply of seeds, however, has been furnished to us, so that we have an opportunity of repeating the experiment, under more favourable circumstances, it is to be hoped, next season.

Mr. R. ATKINS, GARDENER TO VISCOUNT GAGE.

"The *Dolichos Unguiculatus* was a failure in the open air. They were raised in pots, under glass. Some transplanted in June on a south border had the benefit of a hand-glass. When exposed, all the bloom dropped off; not a pod was obtained from them. Those kept in pots produced, under glass, a sufficient quantity of seed to give them a further trial. Some of them I have sown to transplant.

"The *Phaseolus Limensis* was treated much the same way, about the same time, and planted on a south border. The wind affected them so much they soon perished. One plant in a pot under glass produced fifty beans."

LADY DOROTHY NEVILL.

"The *Dolichos*, with the wretched weather we had, did not answer."

C. H. Prichard, Esq.

"The plants came out, but no fruit; nor did they even flower. The season may have been unfavourable, as we had unusually little sunshine."

It is to be hoped that perseverance and more genial seasons will prove that these valuable vegetables may still be added to our gardens.

BUNCH GRASS.

Mr. Higford Burr, an enterprising Member of the Society, is experimentalising with this species of *Festuca*, which, in his opinion, seems likely to be of great service on waste and common lands. Captain Richard Burton (in his "City of the Saints," p. 172) gives the following account of this valuable grass:—

This invaluable provision of Nature is first found, I believe, about fifty miles westward of the meridian of Fort Laramie, and it extends to the eastern slope of the Sierra Nevada. The Festuca is a real boon to the land, which without it, could hardly be traversed by cattle. It grows in clumps, as its name denotes, upon the most unlikely ground—the thirsty sand and the stony hills; in fact it thrives upon the poorest soil. In Autumn, about September, when all other grasses turn to hay, and their nutriment is washed out by the autumnal rains, the Bunch Grass, after shedding its seed, begins to put forth a green shoot within an apparently withered sheath. It remains juicy and nutritious like winter-wheat in April under snow, and contrary to the rule of the Gramineæ, it pays the debt of Nature, drying and dying about May; yet even when in its corpse-like state, a light yellow straw, it contains abundant and highly flavoured nutriment. I brought back with me a small packet of the Bunch Grass seed, in the hope that it may be acclimatised; the sandy lands about Aldershot, for instance, would be admirably fitted for its growth. Fort Laramie is on the River Platte, North America, latitude about 42 N., longitude 105 W., and must be 4000 or 5000 feet above the sea.

Specimens of the seeds of the Bunch Grass will be distributed on application.

The Council has also received from Dr. Milligan, the Commissioner for the Tasmanian department of the Great Exhibition, a parcel containing upwards of forty species of seeds of various kinds of herbs, shrubs, and timber trees. These will be distributed among the Members.

The Council is happy to be able to state that it maintains a friendly intercourse with every Acclimatisation Society now existing, with the Société Imperiale d'Acclimatation de la France, the Societies of Melbourne, Hobart Town, Sidney, Queensland, and New Zealand, and the Società di Acclimazione of Palermo.

Reviewing the proceedings of the past year, the Council cannot but regard the progress of the Society with great satisfaction. With increased numbers and augmented means, the Society appears to be approaching the period when it can safely and prudently embark in the prosecution of experiments upon a larger scale than it has hitherto been able to attempt. The Council feels confident that as a knowledge of the Society and of its objects increases many will be found ready to join its ranks who, although themselves unable to assist personally in its operations, may not be unwilling to contribute

their quota to its assistance and support, from a belief in the beneficial nature of its labours as regards the resources of the country. If the progress of the Society during the past year is to be taken as a precedent, next year will find it in a position considerably to extend the sphere of its operations; but in order that this result may be secured, Members are urged to use every means of inducing recruits to join our ranks.

(By order of the Council.)

F. T. BUCKLAND,
JAMES LOWE, } *Secretaries.*

DONORS AND LIFE MEMBERS.

Abinger, Lord, Abinger Hall, Dorking, Surrey	£10	0	0
Baker, S. W., Esq., Hanson & Co., Constantinople	10	0	0
Berkeley, the Hon. Grantley F., Winkton House, Ringwood, Hants.	10	0	0
Biggs, Dr.	1	0	0
Botfield, Beriah, Esq., Norton Hall, Daventry	10	0	0
Burr, Higford, Esq., Aldermaston, Reading	10	0	0
Chamberlayne, Thos., Esq., Cranbury Park, Winchester	10	0	0
Chantrey, Lady, Claridge's Hotel, Brook-street, W.	10	0	0
Clermont, Lord, 44, Brook-st., W.; Ravensdale Park, Newry, Ireland	10	0	0
Cloquet, M. Jules, 21, Place Vendôme, Paris	10	0	0
Colebrook, John, Esq., 45, Grove-place, Brompton, S.W.	10	0	0
Coutts, Miss Burdett, Holly Lodge, Highgate, N.	500	0	0
Craven, The Earl of, Combe Abbey, Coventry; Hamstead and Ashdown Parks, Lambourne, Berks	10	0	0
Crawford, J. A., Esq., 15, Theatre Road, Calcutta (Agents, Messrs. Crawford, Colvin, and Co., 71, Old Broad-street, E.C.)	10	0	0
Crockford, John, Esq., 346, Strand, W.C.	10	0	0
Damer, Capt. S. Dawson, M.P., 2, Chapel-street, Grosvenor-square, W.	10	0	0
Eden, The Hon. Wm. Geo., Doncaster	10	0	0
Elliott, John Bardoe Bowes, Esq., Deebank, Banchory, Aberdeen (James Corbet, Esq.)	10	0	0
Erskine, Miss, 29, Bryanston-square, W.	10	0	0
Fortescue, Earl, 17, Bruton-street, Berkeley-square, W.	10	0	0
Gage, The Viscount, 4, Whitehall-yard, S.W.; Firle Place, Sussex.	10	0	0
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ACCLIMATISATION SOCIETY.

Cash Account

FOR THE YEAR ENDING APRIL, 1863.

RECEIPTS.	£	s.	d.
Balance in hand, as per former account	422	14	4
Donations	190	0	0
Subscriptions	191	16	6
Ditto (Guernsey Branch)	11	18	6
By Sale of Chinese Sheep and Lambs	124	0	0
Ditto Arum Bulbs	2	12	6
Subscriptions unpaid	37	16	0
	£980	17	10

DISBURSEMENTS.	£	s.	d.
Remitted to Melbourne, for Birds, &c.	150	0	0
Printing Reports, &c., Stationery, Advertisements, and Postage	98	6	6
Clerk's Salary (56 weeks)	70	0	0
Rent of Offices	35	0	0
Housekeeper's Charges, Firing, &c.	11	18	10
Paid Expenses of Animals, Food, &c.	46	10	0
Dinner Expenses	25	0	0
Incidental Expenses, Carriage of Parcels, &c.	17	8	0
Subscriptions due	37	16	0
Balance	488	18	6
	£980	17	10

JOHN BUSH, *Treasurer.*

Examined and found correct,

JOHN CROCKFORD,
C. S. TOWNSHEND, } *Auditors.*

29th April, 1863.

ACCLIMATISATION SOCIETY

OF

GREAT BRITAIN, IRELAND, AND THE COLONIES.

FOURTH ANNUAL REPORT.

1864.

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FOURTH

ANNUAL REPORT

OF THE

Society

FOR THE

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BIRDS, FISHES, INSECTS AND VEGETABLES,

WITHIN THE UNITED KINGDOM.

1864.

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WITHIN THE UNITED KINGDOM.

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Letter to Lowe 7

RULES.

I.

THE purposes of the Society are:—

1. The Introduction, Acclimatisation, and Domestication of Mammals, Birds, Fishes, Insects, and Vegetables, whether useful or ornamental.
2. The Perfection, Propagation, and Hybridisation of Creatures already domesticated.
3. The Spread of Indigenous and Naturalised Animals, &c., from parts of the United Kingdom where they are already known, to other localities where they are not known.
4. The Procuring, whether by Purchase, Gift, or Exchange, of Animals, &c., from British Colonies and Foreign Countries.
5. The Transmission of Animals, &c., from England to her Colonies and Foreign parts, in Exchange for others sent from thence to the Society.
6. The Holding of Periodical Meetings, and the publication of Reports and Transactions, for the purpose of spreading Knowledge of Acclimatisation, and of inquiry into the cause of failure.

II.

The business of the Society shall be performed by a Council, to be elected annually, consisting of not more than Twenty Members, and the President, Vice-Presidents, and Officers of the Society, *ex officio*. The functions of the Council are to determine what shall be the operations to be carried out; to make Reports to the Members of the Society upon the progress of the operations; to control all expenditure of Funds; and to recommend to the Society such alterations in the Laws as may seem necessary. The Council shall meet on the first Tuesday of every month. Extraordinary Meetings may be called, on requisition to the Secretaries, signed by not less than four Members of Council. At any meeting of Council five shall be a quorum. Any Member of Council who shall not attend at least three times in the year shall retire, but be eligible for re-election. This regulation, however, shall not apply to the President and Vice-Presidents. The Council shall have the power of appointing Committees of its Members, for the purpose of investigating all circumstances connected with experiments and finance on behalf of the Society.

III.

The Annual General Meeting of the Members shall be held during the first week in May in each year, to receive the Report of the Council and elect the Council and Officers of the Society for the ensuing year. Notice of the time and place shall be sent to Members at least fourteen days previous to the Meeting, and shall be advertised in one or more of the public papers. The Council shall have the power, either of its own motion, or on the requisition of not less than Ten Members, to call a Special General Meeting.

IV.

The Annual Subscription shall be 1*l.* 1*s.*; but in the case of Members elected after the 1st of November, their subscription shall be good until the end of the year next ensuing. A Donor of 10*l.* 10*s.* shall be a Life Member. The Annual Subscriptions shall be due on the 1st of January in each year, or within one month of becoming a Member. When subscriptions are left unpaid

for more than one month after application for the same has been duly made, the Council shall have the power of removing the names of defaulters from the List of Members, unless satisfactory reasons be alleged for the delay.

V.

Persons desirous of becoming Members must be duly proposed and seconded The names of all Candidates shall be suspended in the office of the Society for fourteen days before the day of election, after which the Council shall, at its next or any subsequent meeting, proceed to election. The Council shall have the power to elect Honorary Members of the Society, and also as Corresponding Assistant-Members (without subscription) such skilled persons as they may think likely to further the objects of the Society; but such persons shall not be entitled to vote at the General Meeting.

VI.

The Council shall have the power of entrusting (for experiment and multiplication) to Members or other persons, the Animals, Vegetables, or any articles which are the property of the Society, under agreements to be approved of by the Council and signed by the parties.

VII.

The Accounts shall be presented at the Annual General Meeting, audited by two Members (not of the Council), who shall be appointed at the previous General Meeting.

VIII.

Any Member who shall not comply with these Rules shall cease to be a Member of the Society, and shall lose all right to any of its property, and the decision of the Council shall be conclusive.

JAMES LOWE,
B. WATERHOUSE HAWKINS, } *Hon. Secs.*

FOURTH ANNUAL REPORT

OF THE

ACCLIMATISATION SOCIETY

OF

Great Britain.

THE Council of the Acclimatisation Society of Great Britain have the honour to submit to the Members the Fourth Annual Report of the Transactions of the Society for the year ending May 31st, 1864. They have great pleasure in congratulating the Members upon the improved position of the Society, and are of opinion that the efforts which have been made promise well for future operations.

At the period of the last Annual Meeting, the constitution of the Society was as follows :—

Life Members	46
Annual Subscribers.....	139
Total	185

At the present time, the Society consists of :—

Life Members	81
Annual Subscribers.....	284
Total	365

Showing a clear increase of nearly a hundred per cent. In other words, the number of Members is nearly doubled.

As regards the financial state of the Society, the Treasurer will present his Report (Appendix A.), from which it appears that, expences and outgoings paid. there is in the hands of the Society's Bankers a balance of £438 3*s*. 11*d*. ; in addition to which there is an unascertained balance in the hands of Messrs. Matheson and Co. (on account of the sum granted for the purchase of Chinese Sheep), which the Council has requested those gentlemen to expend in the purchase of Japanese Pheasants, and also an unascertained balance of the £150 transmitted to the Acclimatisation Society of Victoria, to be expended on behalf of this Society.

It will be in the recollection of the Members that, at the time of the last Annual Meeting, the Society had occasion to deplore the loss of its late President the Marquis of Breadalbane, whose efforts to promote the Science of Acclimatisation are widely known. At the Annual Meeting, the Members elected in his place His Grace the Duke of Newcastle, K.G. (then Her Majesty's Secretary of State for the Colonies). The Council has the satisfaction to announce that his Grace was pleased to accept the office thus offered to him, and the important aid which (in both his official and private capacity) he has rendered to the Society during the past year, sufficiently proves the wisdom of the choice thus made by the Members.

The birth of a Son and Heir to their Royal Highnesses the Prince and Princess of Wales appearing to the Council a fitting opportunity for testifying the loyalty of the Society and the attachment of its Members to the Crown, addresses of congratulation on the auspicious event were prepared for presentation to their Royal Highnesses and to Her Majesty the Queen. The regretted illness of our President, His Grace the Duke of Newcastle, has delayed the signature of these documents, but they are now signed and in course of being presented.*

Whereas, from the foundation of the Society, it has been in the contemplation of its Promoters to hold Periodical Scientific Meetings of the Members, for the purpose of reading papers and interchanging information and experience, the Council determined, by way of experiment, to hold a Meeting of that kind in April last. This Meeting was held (by the kind permission of the Council of the Society of Arts) in the Great Room of that Society, 18, John-street, Adelphi, on the evening of the 4th of April. The Right Hon. Viscount Powerscourt, V.P., presided, and the Meeting was largely attended by Members and their friends. The following papers were read:—

1. "On the Reports from Hong Kong, Labuan, Tasmania, and Western Australia relating to Fauna and Flora suitable for Acclimatisation in Great Britain." By Mr. Frank Buckland.
2. "On Oyster-culture." By Mr. James Lowe.
3. "On the Game-birds and Animals of Canada." By Mr. A. W. Crichton.

A paper by Mr. B. Waterhouse Hawkins "On the Acclimatisation of the Eland" was also announced, but was withdrawn, for want of time, to make room for Mr. Crichton's paper. An interesting discussion ensued, and several objects of interest in connection with Acclimatisation were exhibited. The success of this meeting warrants the Council in expressing a hope that a continuance of the practise will be approved of by the Society, and that Members will come forward to contribute, by the reading of papers or joining in the discussions, to the stock of knowledge which the Society is accumulating upon the subjects which it has in regard.

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* Since the confirmation of this Report, the addresses have been duly presented, and have been most graciously received.

Among the most important events of the last year has been the issuing from the Colonial Office (under the sanction of our President) of a series of questions addressed to Her Majesty's Ministers, Governors, and Consuls in various parts of the world, requesting information as to such animals, birds, fishes, insects, and vegetables as are likely to be of use or ornament, whether for domestication or for varying the common food of the people, or for manufacturing, or for any other useful purpose, and whose constitution and habits offer a reasonable prospect of successful cultivation.

These questions were carefully drawn up by Mr. E. Wilson, of Melbourne (V. P.) and Mr. James Lowe (Joint Hon. Sec.). An abstract of these papers will be presented to the Members (as an Appendix to this Report) as soon as possible, and it is expected that this document will prove an addition of the highest importance to the present stock of knowledge on the subject of Acclimatisation. *

The Society has also received great encouragement by the issuing of the following Admiralty Memorandum :—

ADMIRALTY,
10*th October*, 1863.

(Assistance to be rendered to the Acclimatisation Society.)

My Lords Commissioners of the Admiralty, having had under their consideration the important question of Acclimatisation, are pleased to direct that, so far as is consistent with the requirements of the public service, and upon the distinct understanding that no expense whatever is incurred, every facility is to be given by the Commanding Officers of Her Majesty's ships and vessels to any accredited agent of the Acclimatisation Society, who may apply to them through any of Her Majesty's Foreign Ministers or Consuls, or through the Governor of any of Her Majesty's Colonies, for the transport of specimens.

The annexed copy of a circular addressed by permission of the Secretaries of State for Foreign Affairs and for the Colonies to Her Majesty's Foreign Ministers and Consuls and Colonial Governors, in various parts of the world, will explain the objects which the Society has in view.

By command of their Lordships,
C. PAGET.

To all Flag Officers, Captains, Commanders-in-Chief, and Commanding Officers of Her Majesty's Ships and Vessels.

The Council think that the Members have great reason for congratulation and gratitude in this unprecedented extension of Governmental aid to the efforts of the Society.

The Council have great pleasure in announcing that they continue to preserve an intercourse of the most friendly character with the various Acclimatisation Societies throughout the world, and especially with the Société Impériale d'Acclimatation of France and the Acclimatisation Societies of Victoria and Queensland. To the first-named body this Society is much indebted for various offices of kindness, and especially for the friendly and encouraging notice

* *Vide* Memorandum on this subject at the close of the Report, p. 27.

taken of the proceedings of this Society in the bulletins issued by the Société d'Acclimatation.

A silver medal having been awarded by the Council of the French Society to Mr. William Bennett, of Brockham Lodge, near Reigate, for his success in acclimatising and domesticating the Emeu (*Dromaius Novæ Hollandiæ*), the medal was transmitted through the hands of the Secretaries of this Society to Mr. Bennett.

The Council have to return their best thanks to the Société Impériale for various presents of seeds, and of the eggs of the Ailanthus Silkworm (*Bombyx Cynthia*), and to the Queensland and Melbourne Societies for consignments of mammals and birds which have been received, all of which will be found mentioned in detail under the departments to which they belong.

The Council have also great pleasure in announcing that the Acclimatisation Society of Palermo has presented Mr. Buckland, one of the Hon. Secs., with its diploma of membership.

The attention of the Council having been for some time past directed to the important subject of Pisciculture, and it being thought highly desirable that the Society should institute operations for the purpose of distributing among its members the vivified ova and young fry of the more valuable kind of river fish, and especially of the salmonidæ, and of such fish as could be introduced from abroad, the Council took this matter into their serious consideration in September last. An offer was communicated by Mr. Buckland, on behalf of himself and Mr. Stephen Ponder, of Hampton, in which Mr. Ponder offered to erect a set of apparatus, duplicate to that which he had already erected for the Thames Angling Preservation Society, on his premises, and Mr. Buckland offered his aid and assistance in carrying out such operations. After considering this offer, and also a proposition brought forward by Mr. Francis Francis, the Council came to a resolution of which the following is a minute :—

"That a vote of thanks be returned to Mr. Ponder for his offer to aid the Society in the carrying out its Piscicultural Branch, and that he be informed that, after mature deliberation, the Council is of opinion that an entirely independent arrangement seems more desirable."

The Council subsequently determined to confide the carrying out of its Piscicultural operations to Mr. Francis, under whose supervision a building and apparatus have been erected and constructed on his premises (The Firs, Twickenham), with a store pond and other conveniences attached. A detailed report of the operations carried out, the number of ova laid down, the number distributed in a vivified condition, and also of the fry, will be given under the head of Pisciculture. The Council hope that the results thus shown will be found sufficiently satisfactory to warrant the Society in still further extending its operations in this direction.

Under Rule 2, (as modified at the last Annual Meeting) which provides that "the Council shall have the power of extending its number to twenty, by electing members of the Society who are most likely to further its interests," the following gentlemen have been

elected Members of the Council:—viz., Sir Claude E. Scott, Bart., J. W. Malcolm, Esq., M.P., H. J. B. Hancock, Esq., F.Z.S., and Francis Francis, Esq.

On the 20th of September, 1863, the Hon. Grantley Berkeley sent in his resignation as Vice-President and Member of the Society.

The Commemorative Dinner of the Society was held at St. James's Hall, on the 1st of July, 1863, when Herman Merivale, Esq., C.B., Under-Secretary for the Colonies, presided, in the unavoidable absence of our President, His Grace the Duke of Newcastle. A large number of noblemen and gentlemen attended, and several dishes were introduced into the bill of fare for the purpose of illustrating the utilitarian purposes of the Society.

The Council have great pleasure in calling attention to the prosperous and advancing condition of the Branch Society in Guernsey. The Second Annual Report of that Branch, prepared by Dr. S. E. Hoskins, F.R.S., the Honorary Secretary of the Branch, will be found in the Appendix (B), and is a most interesting document.

Several consignments of Mammals and Birds having been received from the Queensland Society as presents to this Society, the Council, being desirous of reciprocating in kind, requested such of the Members as had it within their power to contribute birds of game or other creatures likely to be acceptable at Queensland, to do so. Responding to this, Higford Burr, Esq., of Aldermaston Court, a member of the Council, kindly contributed five handsome pied specimens of the Common Pheasant, and these were sent to Queensland by the *Light of the Age* (Captain Porter), on the 26th of September last. The birds were provided with cages properly constructed, and a sufficient quantity of the proper kind of food was put on board the vessel. One of the Pheasants, however, was missing before the vessel quitted the Channel, and when the *Light of the Age* arrived at Queensland only one bird was delivered to the Society there. As no portions of the birds which were missing were delivered to the Queensland Society, that body very properly refused to pay any reward to the person who had charge of the birds. This case is cited as an example of the difficulties with which Societies like this have to contend; and the Council especially recommends that in all cases where living creatures are shipped from one place to another for Acclimatisation purposes, some portion or portions of the creatures which unfortunately die during the voyage shall be produced on demand of the Society to whom these creatures are consigned.

Another consignment of game birds to Queensland was also arranged, and the use of an entire cabin to contain the same was offered by Messrs. Mackay on board the *Ariadne;* but, owing to the fact that an unexpected number of emigrants required the space, the owners were obliged to withdraw their promise at the last moment. The Council has, however, empowered Mr. Buckland (the Naturalist Manager) to transmit a consignment consisting of fawns of the red

and fallow deer, and also of birds of game, to Queensland when the season is favourable for such an operation, and all Members who have it in their power to do so are earnestly requested to co-operate in thus promoting the offices of mutual assistance between the two Societies, and also in encouraging other Societies to aid us.

The Council have to return thanks on behalf of the Society to the following gentlemen for services rendered to the Society:—

His Grace the Duke of Newcastle, K.G., His Grace the Duke of Somerset, Sir C. Wood, A. H. Layard, Esq., and Herman Merivale, Esq., for the services which, in their various official capacities, they have rendered the Society.

A. C. Maclean, Esq., Haremere Hall, Hurst Green, Sussex, for his successful experiments in cross-breeding pheasants, and for presenting the Society with specimens of his crosses.

Rev. W. Collings, Seigneur of Sark, for having undertaken the care of Wonga pigeons, with a view to breeding them for the Society.

H. O. Carré, Esq., Lieut.-Bailiff of Guernsey, for having undertaken the care of Curassows, with the same view.

Dr. Miller, of the Indian Army, for presents of animals, &c.

Dr. W. Harte Miller, of Victoria, for Bronze-wing Pigeons and eggs.

W. Wienholt, Esq., of Reading, for one Fire-back Pheasant (*Euplocamus Mythropthalmus*).

—— Hepburn, Esq., for the loan of an Emeu.

Dr. Genczik, of Linz, for his endeavours to obtain *Silurus Glanis*.

G. D. Berney, Esq., for presenting Gold Schley.

Col. Denison, for presenting Jungle Fowl.

J. A. Crauford, Esq. (Bengal Civil Service), Calcutta, for presenting birds from India.

Dr. Jager, of Vienna, for assisting in obtaining *Silurus Glanis*.

The Acclimatisation Society of Queensland, for presents of Mammals, Bronze-wing and Green-wing Pigeons, Speckled Doves.

The Acclimatisation Society of Victoria, for making purchases on behalf of the Society.

Jackson Gillbanks, Esq., for his services in introducing Canadian Rice.

Higford Burr, Esq., for his experiments with Pheasants.

John Rice Crowe, Esq., C.B., &c., H.M. Consul, Christiana, Norway, Peter Tronhüüs, Gubldenbranstadt, H.M. Vice-Consul, John Allan, Esq., Christiansund, for efforts to obtain Jerper.

M. Guerin-Meneville, Vincennes, Ailanthus Silkworms.

And for various services:—

Dr. Hooker, of Kew Gardens.

Dr. Bennett, of the British Musuem.

Henry Marshall, Esq., of the Royal Mail Steam Packet Company.

Capt. Porter, *Light of the Age*.

Capt. Gimblett, *Lady Melville*.

Capt. Edward, *The Moravian*.

Capt. Owen, *The Nile*.

Capt. Duncan, *The Glendower*.

Messrs. Matheson and Co., London.

Messrs. Mackay and Co., London.

Messrs. Money Wigram, and Co., London.

Messrs. McLeod, Alport, and Morgan, London.

Mammals.

DEER.

It will be recollected that, in the last Report, Lord Powerscourt gave an interesting account of his experiments with deer in Ireland. This nobleman has in the month of April imported a herd of very fine red deer (*Cervus Elaphas*) from Austria. Of this event we beg to subjoin an account which appeared in the "Field," April 6th, 1864:—

It is with very great pleasure that I have to announce the safe return from Vienna of Mr. Louis Fraser, who has succeeded in bringing home with him a herd of German red deer from Austria. Some time since Prince Lichtenstein, of Pohanska Park, near Luneburg, offered to Lord Powerscourt specimens of the magnificent deer which roam his park, and his Lordship commissioned Mr. Fraser to bring them over for him. On his arrival at the park, Mr. Fraser found the deer already captured for him, and they catch them in this manner. The park is twenty miles round, contains 4000 German acres, and is inclosed, throughout its whole extent, by a wall seven feet high. It required the services of a hundred men, working day and night, in 24 deg. frost, to drive the deer into a place where they could easily be caught. That portion of the park where the deer are to be found is inclosed by the men, who form themselves into a semi-circle, in the manner we read described by Mr. Lloyd when he tells us how they drive the bears in Norway by means of what are called "skals." The men walk some yards apart and carry between them on poles long sheets of canvas some 12 or 14 feet high; they advance in line, and gradually diminish the circle, till at length they drive the deer into a trap, built much in the same way as that into which the natives drive elephants in India. This trap ends in a narrow gangway, where only one deer at a time can enter.

Mr. Fraser found the deer waiting for him in the paddocks, and at once brought up his travelling boxes. These boxes are somewhat like large crates; they are 6 feet long, 5 feet high, and 4 feet 6 inches broad, and each capable of containing two deer in separate compartments; the inner portions of the boxes are thoroughly padded with a soft material, in order that the deer shall not injure themselves by kicking and plunging about. These boxes are placed close to the narrow wall of the trap, and the deer driven into it from behind. Of the number of deer caught, Mr. Fraser took away with him six stags and four hinds (in fawn), and he has delivered seven safe at Powerscourt, near Dublin. The cause of the death of the others was in one instance inflammation of the lungs, from the exertions the animal made to escape capture, and catching cold afterwards; the other two died from no cause under the control of their conductor; one certainly being diseased internally before starting. Two of the animals died in passing through London, and one on the journey.

During the journey Mr. Fraser had many heavy difficulties to overcome, the weather being so excessively cold—more than once there being 14 deg. of frost. During the driving of the deer two men actually died from the cold and exhaustion. He also found great difficulty in persuading the animals to feed when on the journey, and was obliged at the risk of his life to travel with them in the boxes from station to station on the railways, coaxing them to eat a little food out of his hand. This food he judiciously mixed with common salt, which seemed to render it more palatable to his charges. From constantly seeing Mr. Fraser during their journey of several days, the deer ultimately got to know him perfectly well, and were not frightened at him, though if any strangers came to the box they would shrink back and strike with their fore-feet in great alarm. He complains bitterly of the conduct of an official at Holyhead, who persisted in climbing up the boxes and suddenly throwing the light of a lantern upon the journey-worn and tired animals, thereby giving

them a most unnecessary fright, the more provoking as they were so near their future home.

These deer from Pohanska Park measure about 4ft. 6in. at the shoulder; their actual weight has not yet been ascertained, but the deer at Powerscourt average about 250lb. English, whereas those killed at Prince Lichtenstein's park weigh about 350lb. German, and upon an arch in the park Mr. Fraser saw portraits of deer, which, killed some tme since, were said to weigh 5 cwt. to 6 cwt.

Mr. Fraser tells me that he receivedthe greatest assistance in catching the deer at the park from Mr. Hills (the son of old Tom Hills, late huntsman of the Surrey hounds), and also from Mr. Reynolds, the stalmeister, who occupy positions in Prince Lichtenstein's huntng establishment. Without their aid he would hardly ever have been able toget through one of the most difficult parts of his task, namely, to get the deer into the boxes. The feat of transporting for so long a journey ten wild and newly-caught animals like these deer, and delivering so large a proporion as seven of them alive and well, does Mr. Fraser the greatest credit, for he must have worked day and night at them—animals requiring ceaseless attention and care.

The highest commendation should be given by sportsmen to Lord Powerscourt for his earnest endeavours to impart new blood into the herds of red deer within her Majesty's British dominions, as there can be no doubt but that judicious crossing with these noble German red deer will very much improve the British breed—of late years sadly degenerating in size, weight, and general appearance.

FRANK BUCKLAND.

From the latest accounts we learn that these deer are all in perfect health.

THE WAPITI.

Of the Wapiti (*Cervus Canadensis*) at Powerscourt, Mr. Robertson (his Lordship's bailiff) reports as follows:—

The last pair that Lord Powerscourt got were quite young, and at once placed in the Upper or Great Park; they are doing remarkably well, certainly nothing could have thriven better since they came. I cannot say so much for the old Wapiti stag, that we have had for seven years in the New Park; since he shed his horns, his condition went down, and he got so weak, especially in the hind quarters, that it was with great difficulty he could walk at all; he is now improving slowly, the new head making little progress. The hind looks remarkably well. The Japanese and Sambur are doing well.

Mr. Robertson reports that the Elands, formerly at Powerscourt, have been transferred to the King of Italy. When they left, they were in perfect health, and high condition. The Moufflons are reported to be doing well and breeding freely.

CHINESE SHEEP.

The following report as to these animals has been received from Mr. Robertson, Lord Powerscourt's bailiff:—

So far as my experience goes, I must still adhere to my former statement; we have crossed twice, and still with small poor fleeces, you must suffer a cut of 4*d.* per pound on the wool. When we were selling lambs at 25*s.* each, butchers would not buy the Chinese crosses at any price of the same age. I find they are not so prolific after crossing, and the lameness still continues. I must honestly state I have little hope of their ever proving a lucrative animal.

The report by Mr. Robertson confirms the experience which we

have had of this animal in Englnd ; viz., that in a wet climate, such as Ireland, the Chinese sheep reuire great care and tending, careful feeding and housing. There is no reason, however, for believing that in dry localities, and where the animals can be carefully tended, they will not thrive. The smallstock of animals of the pure breed under the care of Mr. Bush, he Treasurer, have died, with the exception of one ram.* The repat of Mr. Lupton, M.R.C.V.S., upon two ewes which were submitted to him for examination after death, gives the following diagnosis of heir state :—

Upper Richmond House, Hill Rise, Surrey.

During the latter part of last winterny attention was directed to two ewes, the property of the Acclimatisation Soiety, and then located at Mr. Bush's, Clapham. From facts elicited during a conversation with Mr. Bush, I learnt that the two sheep were the subjcts of diarrhœa, and that no sort of food or medicine seemed to posses the power of reducing the malady ; after examination sulphate of iron in mall doses was prescribed, and old split brans and oats were recommended as fod. For a short period the disease yielded to this treatment, but unfortunately aferwards the diarrhœa recurred, and death resulted.

POST MORTEI EXAMINATION.

Very little food in the first two stomachs, viz., the Rumen and Reticulum ; a small quantity of ingesta in the thrd or Ornasum ; none in the fourth or Abornasum, but its internal coat was ongested, as also were the lining coats of the intestines, and in many places apparances indicative of the future formation of abscess occurred. The intestnes were filled with a thin milky fluid mixed with mucus, and almost devoid of any solid matter.

Both ewes exhibited the same post nortem appearances, in addition to which on the brain of one I discovered a badder worm, the *Canarus centralis*, but before death the subject of it exhibitedno symptoms of sturdy (or vertigo). I mention it, therefore, merely as an iten in the examination.

The ewes in question were very enaciated and small, and died from the effects produced upon them by diarrhœa, brought on by the congested state of the intestines. The congestion resuled as a consequence of cold, or of any other cause calculated to devitalise thesystem locally or generally.

J. D. LUPTON, M.R.C.V.S.

As to the other Chinese Sheep in the care of members, and the crosses between them and other breeds, we have received several reports, generally unfavourable to the sheep in their pure state, but in some cases favourabb to the cross breeds.

WOMBATS.

Three Wombats (*Phascolomys ursinus*), were received from the Victoria Society, having been purhased on behalf of this Society. These creatures are alive and wel, and run wild about Mr. Bush's premises. They are very tame ant their habits most interesting. It has been objected against these anmals that they will do much injury by burrowing, but experience hs shown that when in a state of domestication and where a habitaton is provided for them they do not burrow, but accommodate themselves to their altered circumstances.

* It should be stated that at the time the Chnese sheep in Mr. Bush's charge were so dying off, they were housed at night and fed with oilake, hay, and corn.

Birds.

As regards experiments with Birds the Council beg to report the operations of the last year as follows :—

HONDURAS TURKEYS.

On the 13th of June, 1862, and in July following, six Honduras Turkeys were received, through the kindness of Robert Marshall, Esq., of the Royal Mail Steam Packet Company. These birds were consigned to the care of Mr. Bush, and during the following year sixteen young poults were reared. Some of these were distributed among the members of the Society, and there remain now under the care of Mr. Bush seven cocks and four hens. One of the hens is now sitting on a good nest of eggs. Some of these birds have been distributed to Mr. Stone, Sir C. Rushout, and J. W. Malcolm, Esq., M.P., to breed from on behalf of the Society upon the usual conditions.

CURASSOWS.

A pair of fine Curassows, sent from South America (through the kindness of R. Marshall, Esq.) were consigned to the Branch Society of Guernsey, and were placed under the immediate care of the Lieutenant-Bailiff of the Island, H. O. Carré, Esq. An account of them will be found in the Report of the Guernsey Branch. (Appendix C.)

It should be mentioned that Mr. Carré (who is a most observant naturalist), after studying these birds, is of opinion that the hen is an old bird and barren. Both birds, are, however, reported to be "in excellent condition."

GUANS.

The Society has three Guans, but they are all males. One drawback to these birds appears to be that they are quarrelsome and combative, not only attacking the other birds in the yard, but they will fly at those who look after them, and will peck them.

INDIAN BIRDS.

In December, 1863, a pair of Jungle Fowl was presented to the Society by Col. Denison. These unfortunately died immediately on their arrival, probably in consequence of cold and exposure. Mr. Buckland reported, after making a *post mortem* examination, that they were thin and out of condition.

In the month of April, Col. Crawford presented to the Society four Jungle Fowl, of which, however, only a pair arrived. In his letter advising them, Colonel Crawford reports as follows :—"They are very wild in their habits, but I hope they will reach you alive."

When, however, the birds arrived by the ship *Nile* (Captain Owen), it was found that instead of being "very wild," they were singularly tame. The hen has laid, and three chickens have been hatched.

In May, Mr. William Wienholt presented to the Society a pair of Fire-back Pheasants. The hen bird had unfortunately died in the passage. The cock bird is alive, and is a beautiful bird.

In August, 1863, Dr. Miller presented an Indian Partridge. As this is a very desirable bird for acclimatisation, it is hoped that the Society may have a better opportunity of introducing specimens.

CROSS-BREED PHEASANTS AND INDIAN BIRDS OF GAME.

The results obtained by A. C. McLean, Esq., of Haremere Hill, Hurst Green, Sussex (one of the members of the Society) by crossing the Common Pheasant with the Japanese Pheasant are highly satisfactory. The bird produced by this cross is exceedingly beautiful in plumage, and Mr. McLean has succeeded in breeding several hundreds of them, which are now in his preserves.

The Council is in great hopes of receiving, during the ensuing winter, Indian Pheasants, through the kind offices of Mr. Herman Merivale, and of Sir C. Wood, Her Majesty's Secretary for India, who has sent out despatches on the subject. A long list of game birds which are desirable has been sent out by Mr. Stone, and an agent appointed in Calcutta to receive the birds.

A balance of money being in the hands of Messrs. Matheson (the residue of the sum voted for Chinese Sheep), the Council has requested those gentlemen to communicate with their correspondents in Japan and China, with a view to laying out the surplus in the purchase of Japanese Pheasants, which they have kindly consented to do.

WONGA WONGA PIGEONS.

The Society has received by purchase from the Acclimatisation Society of Victoria three lots of Wonga Wongá Pigeons (*Leucosarcia picata*), viz., on June 24th, 1863, seven birds; on March 14th, 1864, a pair; and on April 14th, 1864, seven pair. This last was a most successful lot, fifteen having been shipped at Melbourne, and only one died on the passage. These birds have been distributed as follows:— In August, to the Rev. William Collings, Seigneur of Serk, a pair; to Lady Dorothy Neville, two pairs; a pair to Dr. Bull, Hereford; and two pairs to Mr. Hancock, to breed from on the usual conditions. The rest remain under the care of Mr. Bush.

The Society has now, alive and doing well, in their aviary, eight of these beautiful birds, although they have not yet bred. One of a pair entrusted to Mr. Tegetmeier dropped an egg from its perch, but there is no evidence that this was an impregnated egg. Mr. Tegetmier, who has had great experience in the management and breeding

of pigeons, is of opinion, however, that these birds will breed. By confining them in a large aviary furnished with underwood and cover, the birds become tamer and more domesticated. They feed very freely upon fruit. It is satisfactoy to find that those under Mr. Bush's charge have gone through the severity of last winter without any protection whatever from the frost and cold; this spring they even made their nest, but they did not lay any eggs. Further particulars respecting this interesting bird will be found in the Report of the Guernsey Branch. (Appendix B.)

BRONZE-WINGED PIGEONS.

The Society received on June 3rd, 1863, two of these birds, presented by the Acclimatisation Sciety of Queensland, and on the same day purchased four; on June the 24th, 1863, one bird was presented by the Queensland Society; on March the 16th, 1864, another one was presented by the Queensland Society; and on April 19th, 1864, two were presented by Dr. W. Harte Miller, of Victoria, with three eggs, which were placed under a tame pigeon, but did not hatch out. On May 23rd, nine Bronze-wings were received by the *Lincolnshire*, having been purchased for this Society by the Acclimatisation Sciety of Victoria—all but two in pretty good condition. These are all doing very well. The Society has now, therefore, nineteen Bronze-wings, and it is satisfactory to be able to announce that on the 14th of April, a pair of young birds were hatched out, under the care of Mr. Bush, and are now strong healthy birds. The same pair of birds are now (May 16th) nesting again. These birds have stood the whole of the winter, with no protection but the aviary netting.

DUSKY DUCKS.

Seven young Dusky Ducks were hatched last year at Mr. Bush's, but they died. Some full-grown birds were sent to J. Charlton Parr, Esq., and Higford Burr, Esq. Mr. Burr reports that these birds are doing very well, as also the cross beween the Pin-tail and the Buenos Ayres Ducks which have bred in his ponds.

HJERPER.

To obtain living specimens of the Gelinotte or Hjerper, the Count Arco Zinneberg has been written to by Lord Powerscourt relative to getting them from Switzerland, also (through the kindness of Mr. Dering, one of our Members), application has been made to Herr Zangerlie, of Bittburgh, Prussia; M. le President Velli de Rager, Canton de Grissons, Switzerland and M. Boumold, Grôs Antoin, Switzerland, one of our Members. The assistance of Mr. Consul-General Crowe, and of Consul Allen of Christiana, Norway, have also been secured, and they have promised to obtain them if possible. These birds, however, are exceedingly difficult to capture, and do

not live very long in confinenent. It is, however, a matter of satisfaction to know that Black Game has been thoroughly established in Norway.

OTHER BIRDS.

It is much to be regretted that the two Trumpeters (*Psopheo Crepitans*), have both died. The Native Companions from Australia, mentioned in the last Report, are in excellent condition.

A consignment was received in June, 1863, from Queensland, consisting of one Cock Brush Turkey (*Talegalla Lathami*), a pair of Small-hawks, and a Dingo. The Dingo it is proposed to present, with a female of the same species, belonging to the Zoological Society, to the Zoological Gardens of Dublin.

As regards the *Talegalla*, it is proposed that, whereas the Zoological Society has eight specimens of these birds, the Council of that Society should be requested to commit one of their hens to the care of this Society, to be kept with the male bird belonging to this Society in some convenient place suitable for their accommodation, under the condition that the produce (if any) should be shared between the Societies, and, in return for this, it is proposed that the Hawks should be presented to the Zodogical Society.

The Society has also received from Queensland, on March 16th, 1864, three Australian Speckled Doves, and two Greenwing Pigeons, which are doing well. They have also one Emeu from Queensland in excellent condition and very tame. By the kindness of Mr. Hepburn, of Clapham Common, another Emeu has been lent to Mr. Bush, on the conditions that, if there be any produce, Mr. Hepburn shall be entitled to a share. These Emeus are very tame, and highly amusing and ornamental creatures for a gentleman's park or lawn.

Fish.

The Council has not relaxed its exertions to obtain living specimens of the *Silurus Glanis* from Germany, and after correspondence with Dr. Genczig, of Linz, Upper Austria, specimens of the fish were procured for them by the kindness of Professor Jager, at Vienna. By the permission of Lord Poverscourt (who was employing him at the time), Mr. Louis Fraser was entrusted with the bringing back of these fish. The experiment was, however, unsuccessful. Mr. Fraser reports as follows :—

May 28th, 1864.

The two Silurus which I received from the Thiere-Garten, in Vienna, were too large to travel in the fish carrier sent by Mr. Buckland, therefore I allowed Dr. Jager to pack them his own way, viz., in wet moss. I examined them a few hours after their arrival at the railway station. They were very weak. One died the same day, and the second a day or two after. They had been kept in a basket in a pond in the gardens, with 14° of frost at the time,

which, I fear, was too much for them. They required deeper water, which would have saved them from the extremity of the weather

LOUIS FRASER.

It is highly to be regretted, under the circumstances, that any attempt was made to transport these fish by a mode so certain of failure as packing them in wet moss.

MURRAY COD.

It having been determined that the Murray Cod, or Cod-Perch (*Oligorus Macquariensis*), would be a most desirable acquisition to this country, the Council requested the Victoria Society to purchase a consignment of these fish, which they were good enough to do from the Murray Fishing Company. The fish were caught at the junction of the Edward and Murray river, and floated down the river to a place called Echren, and thence forwarded to Melbourne through the courtesy of the Victoria Railway Company.

On the 21st of May, the ship *Lincolnshire* arrived at the docks, and Mr. Buckland at once proceeded to take charge of the fish. The Council regret much to state that the experiment has unfortunately failed. Mr. Thatcher, the steward of the vessel, reports to Mr. Buckland that he received on board the *Lincolnshire*, on Saturday, the 20th of February, 130 fish, measuring from 2 to 2½ inches long. They were placed on board, in excellent condition, by Mr. Spragg, Secretary of the Acclimatisation Society of Victoria. The vessel used to transport them was a tub or cask, containing 50 gallons, measuring 3 feet 5 inches at the mouth, and 4 feet deep, this vessel being slung on gimbals. The water supplied to the fish was from the ordinary tanks of the vessel. They got on very well, until the 28th of February, when fresh water was added to them, and they all immediately died. Mr. Thatcher thinks there must have been something in the water or the individual tank from which the water was taken for the fish the morning they died, and he has kept a bottle of it for analysis. They had, up to the time they died, been supplied with water.

GOLD SCHLEY.

G. D. Berney, Esq., was good enough to present to the Society some specimens of the Gold Schley, an exceedingly beautiful fish of the Carp tribe. These fish were sent alive in large carboys. They were exhibited at the Annual Dinner of the Society, and afterwards confided to the care of Higford Burr, Esq., of Aldermaston Park, Reading. He placed them in a pond, and has every reason to believe they are doing well there.

CRAY-FISH.

As regards the Cray-fish sent by Mr. Early, of Witney, to Viscount Powerscourt, Mr. Robertson reports thus :—

It is difficult to pronounce whether they may ultimately establish them-

selves to be useful; but one thing is certain, numbers of them originally put in the stream are still alive.

PISCICULTURE.

As regards Pisciculture and the advances made in this science, the Council present the report of Mr. Francis Francis (Appendix C.), to whom they have entrusted the Piscicultural operations.

Mr. Buckland has also been doing his best to popularize the knowledge of this useful art. He has exhibited the process at the following Public Institutions: — Royal Horticultural Gardens, South Kensington; Zoological Gardens; Crystal Palace, and South Kensington Museum. He has also given lectures upon the subject at Liverpool; Royal Artillery Institution, Woolwich; Society of Arts; Clapham; London Institution, Finsbury; and elsewhere. In conjunction with J. A. Youl, Esq., Mr. Moscrop of the Wenham Lake Ice Company, and other gentlemen, he has tried some experiments with salmon and trout eggs in ice, the result of which (as at present ascertained) is that ova kept in ice 120 days will not hatch out, but that those kept for 93 days will hatch out well: in fact, the fish from these eggs, nearly half of which hatched out properly, and now alive in Mr. Buckland's troughs at the Royal Horticultural Gardens, are decidedly better and much stronger fish than those hatched out in the usual way. This fact is of great importance, as affording a solution of a difficulty which has long stood in the way of transporting the ova of valuable fish from one part of the world to another. If, by packing them in ice, ova can be made to preserve their vitality unimpaired for 93 days, it is impossible to say what may not be done in the way of interchanging the fish of different countries.*

OSTREACULTURE.

The art of Ostreaculture having lately attracted great attention on the Continent and in this country, your secretaries (Messrs. Buckland and Lowe) have both exerted themselves to be of service in this matter. Mr. Lowe has visited several of the scenes of Ostreaculture on the coasts of Brittany, especially at Concarneau and the Imperial Oyster Parks of the Baie de la Fôret, where he had the advantage of studying the subject in the company of some of the most able coadjutors of M. Coste. On his return to this country, Mr. Lowe published the result of his observations in a series of papers in the "FIELD" newspaper, and also described from the works of M. Coste and others, the details of the processes of Ostreaculture now in use in

* Since the confirmation of this Report news has been received from Australia announcing the successful arrival at Melbourne of ova, packed in ice. These ova were hatched out, and the young fish have arrived safely in Tasmania. This experiment has also demonstrated the valuable fact that the vitality of the ova may be preserved in ice for a much longer period than was expected.

France. These papers will shortly be republished in the form of a volume.

Mr. Lowe has also had the honour of reading a paper on the subject of "Oyster Culture" before the Society of Arts, in which he recounted the history of the art, and described the nature and habits of the Oyster, and the principles which relate to its cultivation. This paper has been published at full length in the *Journal of the Society of Arts* for the 20th of May last.

The Council is happy to see that the attention of the people of this country is now fully awakened to the desirability of fertilizing those sterile and hitherto useless portions of our foreshores which are adapted to this mode of cultivation. It is beyond dispute that upon the shores of this kingdom there are large tracts of shore where, between the high and low water marks, this operation may be carried on with great advantage to the natural resources of the country, and without in any manner interfering with existing rights.

In the Island of Guernsey (where the subject of Ostreaculture was first of all mooted by Henry Tupper, Esq., a Jurat of the Royal Court, and afterwards by Mr. Lowe) the cultivation of the Oyster has now been taken up with spirit; several companies have been set on foot and small plots of foreshore have been granted by the Royal Court for Ostreacultural operations.

The Council would suggest that in attempting these experiments it would be as well to pay some attention to other species of oysters besides the "native" of Great Britain. Accounts speak well of the American Oysters, and also the oysters found in the Cattegat, and these might very fitly become the objects of experiment.

Insects.

The Society will be pleased to hear that Lady Dorothy Nevill continues to have great success with her Ailanthus Silkworms. This spring they have laid well. Her Ladyship hopes to have a large number of eggs this year, which she is willing to part with at a small price to cover the expenses. Mr. Bush has also had considerable success with the Ailanthus, and has now twenty-three fine cocoons, which have not yet hatched out. Other members have had considerable success in the cultivation of this interesting and valuable insect, and in the Report from the Branch Society of Guernsey (to which island the Ailanthus Silkworm was taken by Mr. Lowe) some interesting particulars will be found (Appendix C). Thus the science of Ailanthe-culture, which was first introduced into this country by Lady Dorothy Neville, is gradually becoming developed. The Council wish to point out the fact that a gentleman

(named Mongredian) has enclosed several acres of what would be almost waste land, near Bagshot, for the purpose of hatching the Ailanthus Silkworm on a large scale.

That this science is about to be taken up by our Colonies is demonstrated by the fact that Sir Philip Wodehouse, Governor of the Cape, has expressed a wish to have the eggs of the Ailanthus sent over to him, and means will be taken to supply the *desideratum*. The Ailanthus plant, upon which the insect feeds, already flourishes at the Cape in abundance.

A new kind of Silkworm is now under course of experiment by Lady Dorothy Nevill,—viz., the *Bombyx Yama Inai*. Although her Ladyship has lost several by a peculiar kind of disease, which gives the animal the appearance of sudden decay, she still has living specimens left, which she purposes to exhibit when they are about to spin.

Vegetables.

In the Report of the Guernsey Branch will be found accounts of the progrses of the experiments carried on by Members of the Society as to the Chinese Yam (*Dioscorea Batatas*), Hook-podded Pea (*Dolichos Unguiculatus*) and Lima Bean (*Phaseolus Limensis*), all of which are proceeding very satisfactorily. Favourable reports as to these vegetables have been received from other Members of the Society, and also as to the Brazilian Arrowroot. Those Members who have undertaken the cultivation of this valuable tuber are referred to the last Report for a description of the proper mode of preparing the fecula.

It is hoped that the partial success in cultivating the Hook-pooded Pea which has been achieved in Guernsey will stimulate Members in still further endeavours to accomplish the acquisition of that highly desirable vegetable. A fresh consignment of seed in excellent condition has been received from Lieutenant-Governor Eyre, of Jamaica (through the Foreign Office). It has been distributed among the following Members for cultivation and experiment:—

Lord Abinger,
John Bush, Esq.,
Highford Burr, Esq.,
John Colebrook, Esq.,
Col. J. Le Couteur (Jersey),
Rev. P. Le Feuvre (Jersey),
Viscount Gage,
S. Gurney, Esq.,
Dr. Hoskins, F.R.S. (Guernsey),
J. Flower Jackson, Esq.,
Carey de Jersey, Esq. (Guernsey),
Jonas Levy, Esq.,
James Lowe, Esq.,
Lady Dorothy Nevill,
Mrs. Leigh Sotheby,
J. J. Stone, Esq.,
Lord Tredegar.

Through the kindness of Jackson Gillbanks Esq., seeds of the Canadian Rice (*Zizania Aquatica*) have been distributed to Lady

Dorothy Nevill, J. Wingfield Malcolm, Esq., and Thomas Chamberlayne, Esq.

The Council has now for distribution among such of the Members as are desirous of attempting the cultivation of the same small parcels of valuable Seeds, which have been presented to the Society by M. Pierre Pichot, a member of the Council of the French Société d'Acclimatation. Among these are several varieties of Peruvian Maize; the Ebony Tree (*Diospyros Ebenus*); a peculiar kind of Chinese Thistle, which produces a fibre capable of being spun into very fine thread; a new kind of Sorglio; a new kind of Turnip, and *Cryptomeria Japonica*. These will be immediately distributed.

Medal.

The Council wish to impress it upon the Members that the main source of obstacle in the way of the operations and experiments of the Society is the difficulty of enlisting the *zeal* of persons abroad who might render essential service to the Society, and especially the officers of the vessels which bring over the objects for experiment, and they are of opinion that much of this might be cured if the Council had it in their power to bestow rewards in the form of Medals (gold, silver, or bronze) upon the persons who render aid to the Society. Before, however, they can do this an appropriate die must be provided, designed and executed in a manner worthy of the Society, and symbolical of the objects which it has in view. An important step has already been taken in this direction by Mr. Waterhouse Hawkins (one of the members of the Council), who, in the ornamentation of the addresses to Her Majesty and their Royal Highnesses the Prince and Princess of Wales, has furnished a very beautiful design, which might well be adopted for the Medal.

It appears, however, that to have a die properly and fittingly executed would cost from £100 to £150—a larger sum than the Council feel justified in expending out of the funds of the Society. They, therefore, take this opportunity of introducing the subject to the Members, with a view to ascertaining whether, by subscription among such of the Members as may be willing to aid in a matter so important to the prosperity of the Society, the sum necessary for providing the die can be raised.

The Council further desire to point out that as soon as the die is provided, it will be in the power of individual Members to found medals in connection with the Society, to be offered as rewards for the success of experiments in which they take a personal interest.

In conclusion, the Council, whilst congratulating the Members upon the increasing prosperity of the Society, desire still to impress upon them that much yet remains to be done before the Society can

occupy the position to which it aspires. It is highly satisfactory to know that, within the short space of one year, the number of members has doubled; yet when the small amount of the subscription is considered, it is obvious that until the number of annual subscribers is greatly increased it is impossible for the Society to carry on its experiments in an independent manner, and upon a proper scale. Unlike foreign societies of the same character, which have the benefit of large pecuniary assistance from the Governments under which they exist, this Society depends entirely upon the liberality of its Members, and to its Members, therefore, the Council appeals, confident in the hope that what has been done will be accepted as the earnest of future and more important achievements, and that during the coming year zealous endeavours will be made so to increase the number of Members as to place it within the power of the Council to have an experimental farm or garden wherein the operations of the Society may be conducted.

FRANK BUCKLAND, JAMES LOWE — *Joint Hon. Secs.*

THE REPORTS OF HER MAJESTY'S GOVERNORS AND CONSULS THROUGHOUT THE WORLD ON ACCLIMATISATION.

THE volume containing the digest of the numerous valuable and interesting Reports on Acclimatisation received from Her Majesty's Governors and Consuls throughout the world, under the circumstances related at page 11, is being prepared for the press by Mr. Lowe, and, it is expected, will be issued before the ensuing winter. It is expected to contain a mass of information on this subject never before brought together, and classified so as to be easily referrable. Papers on subjects connected with Acclimatisation will also be contributed to this volume by Mr. Buckland, Mr. Waterhouse Hawkins, Mr. Crichton, and other practical Members of the Society. It is hoped that arrangements can be made to publish the volume upon such terms that each Member will receive a copy without expense.

APPENDIX A.

Cash Account

FOR THE YEAR ENDING APRIL, 1864.

RECEIPTS FROM APRIL, 1863, TO MAY, 1864.

RECEIPTS.	£	s.	d.
Balance in hand	488	18	6
Donations, Life Members, and Subscriptions	747	16	5
Guernsey Branch	15	12	9
Cash for Fry and Ova to May 30	61	5	2
Cash for Chinese Wool and Skins (Sheep)	1	2	6
	£1314	15	4

DISBURSEMENTS.	£	s.	d.
Vote for Pisciculture (including cost of erecting the House and setting up the Apparatus, Wages of Assistants, Travelling Expenses, and expenses of Collecting Ova, Carriage &c.)	298	11	10
Printing Reports, Advertisements, Stationery, Stamps, Postage, including Reports to Governors and Consuls, Illuminated Addresses to the Queen and Prince of Wales, &c.	176	6	0
Expenses of Animals—Purchase, Fees, Carriage Charges, and Food for two years	96	13	11
Clerk's Salary (55 weeks) to April 20, 1864	105	18	0
Vote to Secretaries	100	0	0
Rent, and Office Table	38	0	0
Housekeeper, Firing, Gas, &c.	12	5	8½
Dinner Expenses	26	9	0
Balance at Banker's	438	3	11
Balance — Secretary and Clerk	22	6	11½
	£1314	15	4

JOHN BUSH, *Treasurer.*

Examined and found correct,

JOHN CROCKFORD, *Auditor.*

29th April, 1864.

APPENDIX B.

SECOND ANNUAL REPORT OF THE GUERNSEY BRANCH OF THE ACCLIMATISATION SOCIETY.

Wednesday, December 30th, 1863.

The Bailiff, SIR STAFFORD CAREY, *President*.

AT the Annual Meeting, held at the Royal Court House, on the day above mentioned, the following Report was read:—

The Committee of the Branch Society, in their Report of the first year's proceedings, ventured to anticipate greater progress as time went on. They now trust that their anticipations will not be found to have been entirely without foundation.

In the first place, they have to announce the accession of several valuable Members, namely: the Rev. W. T. Collings, Lieut.-Colonel McCrea, R.A., John Leete Eland, and Joseph Collings, Esqrs. The number of Annual Subscribers now amounts to sixteen—no very large amount, it must be confessed; but, taking into account the population of a small island, it represents a very fair average—consisting, as it does, of gentlemen devoted to agricultural and horticultural pursuits, earnest in their desire to avail themselves of the natural advantages of their soil and climate, so as to second the efforts of the parent Society, and fulfil the expectation that the Channel Islands will become valuable intermediate stations for helping the products of warmer climates into the United Kingdom: a result fraught with mutual advantage.

One of the Secretaries of the Council, Mr. Lowe, when he paid us a visit last August, wound up his admirable address in the following words, which are well worthy of repetition: "From Guernsey," said Mr. Lowe, "where the Members must necessarily be few in number, the pecuniary contributions of this branch to the resources of the parent body can never be very large, but the aid which you may render in the way of zealous, energetic, intelligent work may be immense. Blessed as you are with a genial climate and a fertile soil, you may render to England the most important assistance in persuading the natural riches of other climes to accommodate themselves to her shores. As far as I know, every one of you is already a zealous cultivator of the gifts of Nature: you have gardens in which you take great pride, and upon which you lay out a great deal of money. What the parent body expects of you is no new thing, nor is it out of your way. The British Islands owe almost every useful animal and vegetable of which they can boast to practical Acclimatisation, and it is the object of our Society to increase the stock. What we ask for, then—what we expect of you—is diligence in the good work: and sure am I that, if you be zealous and energetic, England will not be ungrateful."

In confirmation of this assertion, and as an evidence of the interest taken by the parent Society in its Guernsey Branch, it is to be noticed that the Council had previously confided to the care of our Committee some valuable specimens of foreign poultry—highly ornamental to the lawn and the aviary, and, moreover, choice articles of food. These beautiful birds, which reached us in excellent condition early in July, consist of a pair of Crested Curassows, and a

pair of Wonga-Wonga Pigeons. The former were adopted by our excellent Lieutenant-Bailiff, and the latter were conveyed to Serk, under the fostering care of the *Seigneur*. Under such auspices, and favoured by advantages of climate, it is reasonable to expect that, in due course, these rare birds will increase and multiply abundantly.

The following satisfactory communication in regard to these birds have been received by the Branch Secretary:—

"Valnord, Nov. 30th, 1863.

"During the first fortnight or so after the Curassows came into my possession, they gave me a great deal of trouble and anxiety. They appeared to dislike every kind of food offered to them; and the male bird, whenever he was left at liberty, was in the habit of straying to great distances in the neighbouring fields and orchards. After some time, however, they began to take food more freely, and the male bird lost his roving propensities altogether. They have long been perfectly free; they keep company with the other poultry, and eat the same food, though they seem rather to despise barley as being too small a grain for them; but they are very fond of maize, and especially so of bread or biscuit slightly soaked in water.

"These birds are much more disposed to be familiar than common fowls. They even seem to prefer taking food from the hand than picking it up from the ground. The female, which is the tamest of the two, flies up to the window-sill regularly every morning about breakfast time, in the expectation of being treated to a handful or two of maize, or a few pieces of bread; and afterwards, if allowed, she will enter the room and take pleasure in noticing, and being taken notice of.

"The weather for the last three months has been rather cold for the season, and excessively rainy; but the Curassows do not appear to have suffered from it in the least. They are both in perfect health, and are greatly improved in appearance, especially since the last two months. If they will only breed next spring, I have great hopes, as far as I can judge from their habits, that they will form a valuable addition to our stock of ornamental as well as useful poultry.

"H. O. CARRÉ."

The Rev. W. T. Collings reports that the Wonga-Wongas in his aviary in Serk are thriving, healthy-looking, and plump. "Although much more tame than when Mr. Lowe saw them last, they still continue a perpetual peregination up and down the enclosure, and invariably nest on the ground. We feed them like other pigeons, but with the addition of fruits of all kinds, to which they are very partial.

"I shall be glad to hear what success others may have had with them during the past season, and whether they have bred in England."

THE AILANTHUS SILKWORM.

Mr. Lowe, by permission of the Council, presented us with about fifty Caterpillars of the *Bombyx Cynthia*, a variety of Silkworm introduced into Piedmont from China in the year 1856—a much more hardy creature than that which feeds exclusively on the leaf of the mulberry. The rearing of this newly-introduced variety has already been attended with great commercial success in France; and, at her residence in Hampshire, Lady Dorothy Nevill has also succeeded in propagating it. Its cultivation promises to be a great source of wealth to any country in which it becomes acclimatized; and there can be little doubt of its thriving well in Guernsey, where the *Ailanthus Glandulosa* (the shrub which affords it natural nutriment) is perfectly naturalized, and capable of being easily propagated to any extent.

It happened, fortunately, on Mr. Lowe's arrival, that several young shrubs perfectly adapted to the purpose required were found growing almost spontaneously in Mr. Willis's Nursery Grounds. On these shrubs, surrounded by

light netting to prevent the depredations of birds and insects, the worms were deposited on the 13th of August last. The largest and most vigorous (about fifteen in number), attached themselves readily to the under surfaces of the leaves. They retained that position in spite of thunder, lightning, rain, and wind; eagerly consuming the food within their reach, which necessitated their removal to fresh plants—a process easily accomplished. As early as the 24th of August some of them had attained their fourth stage of growth, indicated by their measuring nearly an inch in length, and becoming gradually greener, with tubercles of the same colour on their bodies. Stormy weather, with heavy rain, succeeded; nevertheless, on the 17th of September one of the worms began to spin, others followed, and early in October ten cocoons were collected.

Up to a certain point, therefore, the first experiment in rearing the *Bombyx Cynthia*, thanks to the care and attention of Mr. Willis, has succeeded so as to afford a rational hope that it may be carried a step further in the course of the ensuing spring.

It may be argued that in the result above mentioned there is great disproportion between the number of Caterpillars placed on the shrubs and the number of cocoons produced; but this discrepancy seems to admit of satisfactory explanation. The worms brought over to us differed materially from each other in size and appearance. By far the greater number were small, dark-coloured, and feeble; the others were half an inch long, active, and "yellow-coloured, with black spots down the belly." The small worms soon disappeared, leaving no trace behind; the larger ones, on the contrary, clung pertinaciously to the plants on which they were placed. Now it appears from the pamphlet already quoted, that the Ailanthus Silkworm in England produces two generations in each season. The inferences, therefore, are that the larger worms, amounting to fifteen, were derived from the first hatching, and the smaller from the second; that the latter crop, not possessing sufficient vitality to resist the vicissitudes to which it was exposed during an autumn unusually stormy, perished; and that only the larger and stronger individuals went through their various stages of development without apparent injury.

Some of the cocoons collected are evidently less perfect than others, and it is to be apprehended that the chrysalis in some cases may have perished prematurely. But if only half the number produce moths in due course—if each female lays the usual average of eggs, estimated at 250; if but a small proportion only of the eggs are hatched—a sufficient number of caterpillars will be obtained to enable us to carry the experiment a step further next season, with better prospect of success.

The amount of practical experience already gained, slight though it be, affords proof that the propagation of the Ailanthus Silkworm is not liable to the various causes of failure which attended attempts at rearing the Mulberry variety in this island. We have ascertained beyond doubt that the former is vigorous and tolerant of stormy weather; that it does not require to be fed; that it feeds itself on the plants which it prefers to all others, and that it requires very little attention, after being placed on the Ailanthus, beyond that of protection, by means of netting.

This precaution, however, we are told, is only required when the scale of cultivation is limited. Thus, according to the great experience of Messrs. Hebart and Lamotte-Barracé, "If, in a large plantation, wasps, ants, or birds do carry off some of the worms, the quantity is not missed; the same reasoning applies to this as to fields where cereals are grown, and in which the ravages of birds and insects are insignificant in comparison with the quantity of the crop."

The quality of this new textile fabric has been examined by persons capable of judging as to its commercial merits. They have pronounced that "the strength of the silk is immense," and to this they attribute "the great durability of the Indian *foulards*, which are composed exclusively of this silk." L'Abbé Incarville states that "it lasts double the time of the mulberry silk, does not spot so easily, and washes like linen." Monsieur de Jongh finds that "the gloss of the Ailanthus silk far surpasses any of the other known kinds of

Bourré de Soie." The weavers of Alsace report that "the cocoons are very easy to card and spin, that they are easily cleaned, and take a good dye. This culture, made on a large scale, will furnish in abundance a stronger and finer floss than the Mulberry Silkworm, and will prove of immense utility in France and England."

In this island, one of the many drawbacks to the cultivation of the ordinary silkworm was the necessity of providing machinery, and procuring skilled labour for winding the silk from the cocoon, or otherwise preparing it. But, in the case of the Ailanthus silk, no such impediments stand in the way, the raw cocoons being saleable articles in France. Monsieur André Marchand, Rue des Petites Ecuries, No. 50, at Paris, offers to purchase cocoons, it is stated, and has on sale "all that is necessary for the culture of the Ailanthus and its silkworm."

As to the supply of food in this island, there can be no difficulty. Mr. Willis announces that he has a large and fine stock of the *Ailanthus Glandulosa* on sale at his Nursery Grounds. The price of these shrubs is trifling, and the public is reminded that the present is a good season for transplanting them. But as regards the Silkworms themselves, it might be a prudent measure to apply to the Council of the parent Society for means of purchasing a fresh stock of Eggs or Caterpillars, to compensate for possible failure in the development of the cocoons in our possession.

To persons who may feel disposed to undertake a branch of industry which promises to be very profitable, Lady Dorothy Nevill's pamphlet is indispensable, and may be purchased for one shilling at No. 102, Fleet-street, London.*

In this Pamphlet it is stated that the shrubs destined for the reception of the worms should be planted about a yard apart, in order that their branches should approximate, so as to enable the worms to go from one plant to the other. The chief stem should be cut down every year, so that young shoots should spring up and produce tender leaves, which are essential, as the worms cannot easily devour old leaves produced by large trees, and without a constant supply of tender leaves most of them perish.

WEST INDIAN PULSE.

In our last year's Report it was mentioned that Mr. Dobree, of St. George, had succeeded in growing a few pods of the Lima Bean. The seeds contained in these pods were sown last spring, and have produced Beans of a much more perfect character, with some of which the experiment will be repeated. Dr. Hoskins has also succeeded in raising a plant of the Hook-podded Pea from Jamaica, which has produced a few well-matured seeds. A portion of these products will be placed at the disposal of the Council, and the remainder reserved for further trials. It must be remarked, however, that the seeds were raised in greenhouses, and the plants, well protected, were then placed in the open air in flower-pots. The scanty results of these careful trials go to prove that no great expectation can be entertained of cultivating this kind of West Indian Pulse in this climate, except as mere objects of curiosity.

CHINESE YAM.

The following letter from H. O. Carré, Esq., to the Secretary, is important in a practical point of view:—

"In compliance with your request, I send you some account of my experience in the culture of the Chinese Yam, although I am not sure that it will be considered of much practical value, as the trials I have made have been as yet on a very small scale, as it is only for the last two years that I have noted the results correctly.

"In the year 1862 my plantation of Yams consisted of two rows, about three

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* The following is the title of the work:—"The Ailanthus Silkworm and the Ailanthus Tree. By Mons. F. E. Guerin—Meneville, &c. Abridged and translated by Lady Dorothy Nevill."

feet apart, occupying a space forty-two feet in length by nearly six feet in breadth. The ground had been trenched to a depth of about two feet six inches, and manured as for a crop of potatoes. Soon after the middle of March the sets were planted twelve inches apart, and about three inches below the surface of the ground, on the top of ridges one foot high. When the plants began to grow they were roughly staked with ends of oak branches, that could not have been used for staking peas. The crop was taken up about the end of November, and, after having been kept in a dry place till the beginning of January, it was well cleaned, and its weight ascertained to be seventy pounds and a fraction, English weight.

'I calculate the produce to have been at the rate of 1lb. for every 3½ square feet of ground.

"This year (1863) I planted three rows in a space exactly 48 feet long by 8 feet wide. The culture was the same as last year, and the crop, well dried and cleaned, weighed about 113lbs. This gives a weight of 1lb. to 3.4 square feet—a result very similar to that of the preceding year.

"We, in our household, value the Chinese Yam so highly for the table, where it is especially useful at the season when the best-keeping potatoes begin to deteriorate in quality, that I intend to extend my culture of it considerably. If I have not done so more rapidly in the course of the last two years, it was because, instead of sub-dividing my sets, so as to increase their numbers, I have generally planted them of full length (from 9 to 12 inches long—longer perhaps than is necessary) with the view to obtain tubers of a good size, and well suited for the table. I shall make a trial with smaller sets next season, and shall be happy to let you know how they answer."

OYSTER CULTURE.

The subject of Oyster-breeding, to which the attention of the Guernsey Branch was early directed by the parent Society, is rapidly becoming of greater practical and general import. The increased and increasing demand for this delicate and nutritious Mollusc; its increasing scarcity, owing to the exhaustion of the natural beds, and its ready conveyance into the interior of distant countries, have augmented its value, according to geometrical rather than arithmetical progression. These circumstance, and the profit derived from its artificial re-production in France, all point out the propriety of adopting a systematic plan for its cultivation in an island which is acknowledged to possess peculiar facilities for such a purpose.

From recent publications we learn that the price of the British Oyster has advanced, within a few months, from forty-two to upwards of seventy shillings per bushel, and that in the retail establishments of the metropolis the price, which was sixpence a dozen, is now ninepence, with a prospect of further advance; so that even now the Oyster may be "worth its weight in penny-pieces." In the Guernsey market, Oysters, which a short time ago were sold at eighteen pence to two shillings, are now selling, in retail, at four shillings per hundred, and these the large variety which are not much esteemed in the English market. It may also be mentioned, as a well-established fact, that the shells, which but a short time ago were looked upon as sheer refuse, have now become marketable commodities for the purpose of laying down Vine-beds, another and an increasing branch of industry. At the present moment the current price for Oyster shells is four shillings per cartload, independent of the cost of carriage.

One of the causes of what is but too truly denominated "a famine price," arises from the lawless destruction of natural Oyster Beds; another cause is alledged to be the low temperature of late years during the season of incubation, which has delayed the maturation of the spawn, and the consequent development of the spat in sufficient abundance to supply the waste.

The last-named cause, however, does not appear to have affected our immediate vicinity. We have plenty of evidence that the oyster-seed still abounds in our seas—we have seen the spat growing in various stages upon sunken rocks; upon the bottom of the dredger, lately employed in our harbour works;

and even upon our quay walls, from which young oysters of sufficient growth for the table have lately been obtained.

A knowledge of these facts induced the Members of our Sub-Committee to cause fascines to be sunk in certain localities during the month of July of the year 1863, by way of practical experiment. It is, however, a matter of doubt, whether the faggot is so likely to retain the oyster-spat as ridge tiles, or fragments of rock. Specimens of tiles and flints, with their adherent oysters, were brought over last autumn by Mr. Lowe and Mr. Henry Tupper, on their return from visiting the Oyster Parks of La Forêt, near Concarneau. They have been carefully preserved with the intention of being exhibited publicly, for the inspection of persons who may take an interest in the subject of oyster breeding, with the view of carrying on experiments in this neighbourhood.

It is now well ascertained that artificial Oyster Parks, so systematically established and encouraged by the French Government, are paying speculations. It is therefore worth considering whether a similar system would not prove equally remunerative, to say the least, in Guernsey. Mr. Asplet, of Jersey, in his very instructive address to the St. Brelade Oyster-breeding Society, asserts that the Channel Islands are much more favourably situated for this branch of industry than l'Isle de Ré, in Brittany; and he gives it as his opinion, that one of the bays near Vale Castle, in this island, is a better locality than any to be found in Jersey.

Some time ago, a Sub-Committee was appointed to enquire as to the feasability of forming Oyster-breeding Parks in some of the bays of Guernsey. Accompanied by Mr. Lowe, a few of the Members visited various localities; obtained the opinions of many influential fishermen, and arrived at the conclusion that there are many places between Perelle and Roquaine, and also near Belgrève Bay, well adapted for the purpose. There are, doubtless, many others equally well-adapted to the purpose, which have not been examined. Mr. Arnold's pond, as it has been proved, is well fitted for feeding young oysters and rendering them marketable, and it is probable that it would serve the same purpose with the Mussel, which might readily be introduced into it, and treated after the manner described by Monsieur Coste. But this pond, already stocked with fish, appears to be better adapted to the breeding of various varieties of Salmon, and for general experiments on pisciculture.

The Sub-Commitee is now engaged in preparing the draft of an application for an Order in Council, to authorize the formation and adopt measures for the protection of Oyster-breeding Parks along the coasts—a preliminary measure well calculated to forward so desirable an object. In the event of its being carried out it would, perhaps, be desirable to introduce the Colchester and other varieties which are more esteemed by connoisseurs, and fetch higher prices than the larger kinds of oyster. The Council of the parent Society offered some time ago to furnish a small supply of the more delicate varieties, to aid in stocking any experimental preserve that might be formed here; and it is to be hoped that an opportunity may soon be afforded for taking advantage of so liberal a proposal. The project of oyster-breeding, if properly carried out, does appear to be one of great promise; and there can be no question that it now ranks in value with herring, pilchard, mackerel, and other fisheries.

LOBSTER-BREEDING.

The artificial breeding of Lobsters is a subject which has been recommended by the Council for the consideration of our Committee. It is stated that London alone requires forty thousand lobsters every day, and that double the number would find a ready sale at a highly remunerative price. Mon. Coste's Reports, presented by the French Government to Mr. Henry Tupper, contain minute and valuable details relative to the reproduction and growth of the lobster. Its artificial cultivation, however, is yet to be practically elucidated; but trials might easily be made in this locality, and success would probably entail a rich reward.

The Committee will endeavour to obtain further information on this subject;

but it must be borne in mind that it is not the province of the Acclimatisation Society, as a body, to enter into any purely commercial undertaking. It merely professes and confines itself to acquiring information, and seeking to procure objects for experiment.

At a meeting of the branch Society, last August, Mr. Lowe distributed among the members some seeds of a beautiful variety of reed called the Elephant Grass, growing at Mysore, at a level of 3,000 feet above the sea, and thriving well in the South of England. The stem is much more glossy than that of the cane, and used in India for making furniture. Some seeds of the American Cotton Plant, and of the Nardoo, from Australia, were also distributed.

John Colebrooke, Esq., one of the Life-members of the parent Society, has recently transmitted some seeds of the *Paniflora Edulis* with a most courteous offer to procure other seeds from India and China for trial in this Island. Mr. Colebrook states that the *Paniflora Edulis* or Granadilla has just come from the Neilgherry hills, that its fruit when sliced andput into tarts is excellent; and that when the ripe pulp is mixed with sherry wine and sugar, it is equally agreeable to the taste.

It is to be hoped that these various seeds will thrive, so as to be favourably reported on hereafter.

The foregoing Report was adopted by the meeting, and ordered to be laid before the Council of the parent Society.

S. ELLIOTT HOSKINS, F.R.S., Hon. Sec.

APPENDIX C.

REPORT OF THE PISCICULTURAL BRANCH OF THE ACCLIMATISATION SOCIETY.

In the formation of the first public Piscicultural Establishment in this country, and in the carrying out of the first year's operations, I have had unexampled difficulties to contend with. In the first place, the ascertained results which we had at hand upon the experience of which to form such an establishment, were very small indeed. The means at my disposal were very limited, and great economy had to be considered; no skilled attendant who had the slightest experience of the work could be found, and added to all this, we have had perhaps the very worst season for piscicultural operations which has occurred for a great many years. This necessarily has thrown an immense amount of labour upon my hands—much more, indeed, than I had ever contemplated. Indeed, the anxiety and labour for many months was most trying and incessant. The inexperience of our assistants and the unfavourable season have inflicted serious losses upon us; still I cannot but think that, on the whole (considering that the first year was, as a matter of course, rather an experiment than anything else) the results have not been unfavourable. Many of the earlier lots of ova which we gathered gave but indifferent results but as the manipulator (who had never until he engaged with me seen an ovum taken) gained experience, of course better results attended his efforts. On the whole, I do not hesitate to say that the operations carried out during the cold weather were as fully successful as our most sanguine anticipations could have desired. With the spring, however, the weather became so unusually hot, (hotter, indeed, according to all authorities, than has been experienced for some forty or fifty years previously) that very heavy losses occurred amongst the fry. I regret also to say, that during my temporary absence from home in May, I have reason to believe that some malicious person entered the fish house and allowed all the water to run out of the cistern, whereby nearly the whole of our Greyling fry, and a very large portion of the Trout fry, were sacrificed. In the Appendix to this Report will be found whatever I have been able to gather upon this act.

I now give the detailed operations with respect to the various fish operated on.

Salmon.—Of these we laid down in the Society's apparatus about
9,500 ova; of these

7,200 ova, and
1,000 fry were disposed of

Total 8,200
—a most satisfactory result

Of Sea Trout we laid down—
13,000 ova; of these

6,850 ova, and
1,300 fry were disposed of

Total 8,150

a less satisfactory result, as one of the largest consignments was the first effort of our manipulator. Still the result is quite up to if not above the average.

Of CHAR or OMBRE CHEVALIER, we received about
12,500 ova, and disposed of

9,500 ova, and
1,750 fry

Total 11,250

—a satisfactory result.

Of LAKE TROUT we received about
10,500 ova, and disposed of

6,500 ova, and
2,000 fry

Total 8,500

—a result not so satisfactory as the others, and owing to some delay on the part of some of the gentlemen who ordered the fry in fetching them away. The space I was able to allot to them being rather confined, we lost many fry. Probably six or seven hundred more of fry would have been added to the list had this not occured.

Of TROUT we laid down from 58,000 to 60,000 ova; possibly there may have been somewhat more. Two or three small lots were clearly immature and bad from the first, and were speedily thrown away. Of these I have taken no account. In some of the lots (particularly one large consignment of 14,000) a considerable number of the eggs were not only immature but insufficiently vitalized, so that less than half of them became vivified. We disposed of
16,600 ova, and
5,200 fry

Total 21,800.

We hatched out, and reared almost to the state of fry, above 17,000; of these the sudden change of temperature, and the necessity for removal, caused a loss of at least 5000 fry, which took place on two or three very warm nights we had in April. Probably 2000 or 3000 more went off in the hot weather, and the rest were sacrificed in the emptying of the cistern above alluded to.

The GREYLING were a heavy failure. We obtained nearly 30,000 ova. As long as the cold weather lasted all went well with them. The first lot we got was about 2,000. They were obtained from a river where the spawning operations were almost entirely over, and were mere rakings and scrapings, treated roughly and left in the can in the river for two or three days. I did not anticipate that they would come to anything—indeed, I hardly thought them worth bringing home; nevertheless, this neglected lot of ova turned out so well that we actually hatched out from two-thirds to three-fourths of them. But at this time the temperature of the water stood at from 45 or 46 to 48 deg. The next lot was as magnificent a consignment of ova as I ever saw, and were got to the apparatus with scarcely any loss. For a time all went well; some of the eggs began even to show the eye, and a portion were picked out for transmission, when the hot weather alluded to set in most suddenly and oppressively. The water in the trays jumped up in two days from 46 and 48 to 54 and 56 degs., and instantly the ova began dying off in large numbers. Whole trays-full had to be discarded, and such is the rapidity with which disorganisation, corruption, and hyssus sets in and spreads amongst ova so remarkably delicate and tender as greyling ova, that much of the vivified ova was involved in the ruin as well as that less advanced, as the heat, instead of moderating, increased, the third consignment of ova shared the same fate. I have no hesitation in attributing the loss to the sudden change of temperature.

and the unseasonable heat which followed. I believe that we do not stand at all alone in this result, as from all quarters I hear the same unvarying account, and I believe that even the French have not been very successful with the Greyling; at any rate, they have sent but little to England, as far as I can gather. So rapid, too, is the developement of the embryo in warm weather that it proved impossible to send out the ova; for no sooner was the eye visible (and I made the attempt on one or two occasions to pick out the eggs and send them away,) than they commenced hatching even during the process of selection. We contrived, however, to hatch out and rear to fryhood about 4,000, nearly the whole of which were slain by the aforesaid drawing off of the water; and we had but a miserable 320 fry to dispose of. The list, then, stands thus:—

8,200	Salmon Ova and Fry	disposed of
8,100	Sea Trout	,,
11,250	Charr	,,
8,500	Lake Trout	,,
21,800	Common Trout, and	,,
320	Greyling.	,,

Total 50,220 ova and fry sent out from the Society's establishment.

One of the principles of our action, however, is to return to gentlemen who assist us a certain per-centage of fry or ova of whatever fish they may select. Thus we sent to the French Government 4,000 ova of Salmon and Sea Trout; and to various gentlemen who have lent us their assistance—

Of Salmon Trout about—
7,000 ova and
1,000 fry
Sea Trout—
600 fry
Charr—
4,500 ova
Lake Trout—
1,000 ova
And Common Trout—
3,000 ova and
1,700 fry.

Of the common trout ova we must, however, deduct 2,000, 1,000 of which were sent to Australia and the other thousand to India. I had hoped also to have included that most delicious and valuable, though slightly known, fish the Burbot, in our operations, and was promised a good supply of the fish previous to the spawning season. I did not, however, receive them until after they had spawned, when I obtained ten brace of them. Two brace (as the fish is so little known and distributed, that it is rather, even in this country, a natural curiosity) I sent to the Zoological Society's *aquaria* to be exhibited. Of the remainder, one has died, and the rest, by the kindness of Mr. Gurney, will in a few days be placed in his stews, where they will have a far better chance of doing well then we could at present possibly afford them; and I trust, when the next breeding season arrives, to be able to distribute more widely this most excellent and curious fish.

I may mention here a very favourable offer which has been made to the Society, through me, by my neighbour Capt. Donnithorne. He has in his field which adjoins mine, a very nice pond, supplied with water from the river adjacent. This supply can be increased to any required extent; and if the pond (which is nearly half an acre in extent, and from one to three feet deep) were properly cleaned and put in order it would be one of the most valuable aids to any future operations (if the Society should think it desirable that I should continue these operations) which we could possibly desire. Capt. Donnithorne very handsomely offers us this pond as a subscription to our resources.

If we continue our present operations, considerable modifications and alterations of the apparatus and building will be required for the ensuing season. But it is proper that the Society should consider whether it will spend any further sum upon property not in its own possession. It might happen that either the Society or myself might wish to sever the connection between us; and a question was asked at a late meeting of the Council as to our tenure, and it seemed that there was some doubt as to the advisability of our placing ourselves in a worse position than we at present occupy. But I need hardly point out that until the Society is in a position to lease or buy a property of its own, on which to conduct its experiments, they must be indebted to their members for the sites or accommodation they require. If, however, the Society continue their operations, so great is the demand likely to be, from the instances I have had of it during this season, that we shall certainly be obliged to resort to a spot where natural streams of water can be commanded and turned to account. I may here say that so numerous have the applications for fry and ova been, even during this our first season, that I have been compelled to refuse a large number of them; while many which were registered have of necessity remained unfulfilled. This I much regret; but I have done my best to avoid it, and also to distribute that which we had at our disposal as fairly and equably as possible. There is another point that I must touch on. So great seems to be the demand for trout ova and fry, that I feel it will be quite impossible out of the resources of my private friends to supply anything like the amount which will be required even for another season; while for the future the difficulty will be very greatly increased. Almost any quantity of fry we could rear would meet with the readiest disposal—so much are they in request; and it will be imperatively necessary for the Society to consider how they will propose to meet this most important point.

FRANCIS FRANCIS.

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ACCLIMATISATION SOCIETY

OF

GREAT BRITAIN, IRELAND, AND THE COLONIES.

FIFTH ANNUAL REPORT.

1865.

FIFTH

ANNUAL REPORT

OF THE

Society

FOR THE

ACCLIMATISATION OF ANIMALS,

BIRDS, FISHES, INSECTS, AND VEGETABLES,

WITHIN THE UNITED KINGDOM.

1865.

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OF

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WITHIN THE UNITED KINGDOM.

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RULES.

I.

The objects of the Society shall be the introduction, acclimatisation, and domestication of all useful or ornamental animals, birds, fishes, insects, and vegetables; the perfection, propagation, and hybridisation of races newly introduced or already domesticated;—the spread of indigenous animals, &c., from parts of the United Kingdom where they are already known;—the procuring, whether by purchase, gift, or exchange, of animals, &c., from the British colonies and foreign countries;—the transmission of animals, &c., from England to her colonies and foreign parts, in exchange for others sent thence to the Society;—the holding of periodical meetings, and the publication of reports and transactions, for the purpose of spreading knowledge of acclimatiation, and inquiry into the causes of success or failure;—the interchange of reports, &c., with kindred associations in other parts of the world, with the view, by correspondence and mutual good offices, of giving the widest possible scope to the project of acclimatisation;—the conferring rewards, honorary or intrinsically valuable, upon seafaring men, passengers from distant countries, and others who may render valuable services to the cause of acclimatiation.

II.

The Society shall be governed by a Council of 21 members, to include a President, Vice-Presidents, Honorary Treasurer, and not more than twelve other Members of the Society, three of whom (viz., those who have attended fewest meetings of Council during the past year) shall retire annually, but be eligible for re-election.

If more than three Members of the Council shall be found to have been absent an equal number of times, then the retirement of the three Members shall take place in alphabetical order, beginning with the first letter.

III.

The Council shall have the sole management of the affairs of the Society, and of the income and property thereof, for the uses, purposes, and objects of the Society; and shall have the sole and exclusive right of appointing paid servants, as a manager or secretary, collector, and such other officers, clerks, and labourers, and at such salaries as they may deem necessary, and of removing them if they shall think fit, and shall prescribe their respective duties. And such Council shall have power to consider and determine all matters, either directly or indirectly affecting the interests of the Society, and if they shall think fit so to do, shall bring the same under the notice of the Members of the Society, at any general or special meeting; and to make such bye-laws as they may deem necessary for the efficient management of the affairs and the promotion of the objects of the Society, and for the conduct of the business of the Council, provided the same are not repugnant to these rules; and to appoint one or more sub-committees, for any purpose contemplated by these rules; and generally to perform such acts as may be requisite to carry out the objects of the Society. And it shall be the duty of the Council to exercise the foregoing powers as occasion shall require, and to furnish reports of the proceedings at every periodical and annual meeting of the Society.

IV.

The Council shall meet on the first Tuesday in every month, unless, by a requisition to the Secretary from four of its Members, a more convenient day be appointed. Extraordinary Meetings of Council may be summoned by a similar requisition. At any Meeting of Council five shall form a quorum. Notice of any change of Meeting shall be given by the Secretary to all whom it may concern.

V.

The Annual General Meeting of the Members shall be held during the first fortnight in May in each year, to receive the Report of the Council and elect one Auditor, an Hon. Treasurer, and three Members of Council for the ensuing year. Notice of the time and place shall be sent to Members at least fourteen days previous to the Meeting, and shall be advertised in one or more of the public papers. The Council shall have the power, either of its own motion, or on the requisition of not less than Ten Members, to call a Special General Meeting.

VI.

The Annual Subscription shall be £1 1s.. A Donor of £10 10s. shall be a Life Member. The Annual Subscriptions shall be due on the 1st of January in each year, or within one month of becoming a Member; but in the case of Members elected after the 1st of November, their subscription shall be good until the end of the year next ensuing. When the Subscription of any Member has not been paid on the first day of March for the current year, the Secretary shall immediately apply to the member so omitting to pay his Subscription, and if the same is not paid by the first day of April following, the Council shall have the power of removing such defaulter from the List of Members.

VII.

Persons desirous of becoming Members must be duly proposed and seconded. The names of all Candidates shall be suspended in the office of the Society for fourteen days before the day of election, after which the Council shall, at its next or any subsequent meeting, proceed to election. The Council shall have the power to elect Honorary Members of the Society, and also as Corresponding Assistant-Members (without subscription) such skilled persons as they may think likely to further the objects of the Society; but such persons shall not be entitled to vote at the General Meeting.

VIII.

The Council shall have the power of entrusting (for experiment and multiplication) to Members or other persons, the Animals, Vegetables, or any articles which are the property of the Society, under agreements to be approved of by the Council and signed by the parties.

IX.

The accounts shall be presented at the Annual General Meeting, verified by two Auditors to be appointed from the general body of Members, one to be nominated by the Council, and the other by the General Meeting.

X.

Any Member who shall not comply with these Rules shall cease to be a Member of the Society, and shall lose all right to any of its property.

XI.

The decision of the Council shall be conclusive on any questions which may arise on the interpretation of the foregoing regulations.

B. WATERHOUSE HAWKINS, *Honorary Secretary.*

REPORT OF THE COUNCIL

FOR THE YEAR ENDING MAY 5TH, 1865.

THE Council desire to submit to the Members of the Acclimatisation Society the following brief report of their proceedings during the past year, which, on the 31st of May, completes the fifth year of the Society's existence.

The Council gladly find themselves in a position to congratulate the Society on the results of the course they have adopted while conducting the Society's affairs through several serious difficulties. Among their greatest difficulties may be ranked the untimely death of their noble President, the late Duke of Newcastle, who did not merely allow his name to appear at the head of the list of Patrons and Vice-Presidents which this Society has the honour to possess, but exerted his interest officially and personally to aid the efforts of the Society in obtaining correct information from every part of the world concerning the various animals and plants which might be brought within the circle of operations that the Acclimatisation Society had designed for its future work. Through the influence and example of the late President, as Secretary of State for the Colonies, the Society has had the benefit of the replies to a series of printed inquiries addressed to the various Ambassadors and Consuls, by means of which the Society has been officially made acquainted with the capabilities of the numerous dependencies of Great Britain with regard to Acclimatisation; and though the author of these advantages is unhappily no more, yet the results cannot fail to place the Society in a position to do good and useful work. The replies to these inquiries having just come into the hands of the Council, they have decided upon presenting a slight outline of them,* collected in haste, as an appendix to the Report (Appendix B), but it is their intention to

* The replies from the Acclimatisation Society of Victoria having been sent to the Secretary of State for the Colonies in a printed form, they are appended at length (Appendix C.) to this Report.

furnish members with the information more at length in a separate Appendix, which will be produced as soon as possible.

The Council, while thus reminding the Society of the benefits received from their late noble President, can with justifiable pride inform them that, in reply to their dutiful request, His Royal Highness the Prince of Wales has conferred upon the Acclimatisation Society the honour of becoming their President. Under such auspices, the Council can but remind the Members that it rests with them to enable the Council to carry out the original and practical views of the Society.

In the Fourth Annual Report (1864) it will be found that the total number of Members is described as having been doubled during the previous year, and it was supposed that a large proportion of the increased number had joined the Society on account of piscicultural operations then about to be carried out at Twickenham, a statement of which proceedings appears in Appendix C., page 36, of the Report for 1864. On the paradoxical difficulties of that Appendix the Council refrain from making any observations, further than that as the manager declined to recognise the right of the Council to ask for explanations, they can only regret that its substance had not been passed in review before them previous to its publication, as the other portions of the Report for 1864 had been. Under these circumstances the Council consider it a duty towards themselves and the general body of the members, to recapitulate, as briefly as possible, the facts which have led to the temporary discontinuance of the piscicultural portion of their undertaking. The apparatus and fish-hatching at Twickenham for last season cost £298 11s. 10d., against which £61 3s. 2d. was received for fecundated ova and fry SOLD to members; the net cost of fish-hatching for the first year was £237 8s. 8d., exceeding by £97 the estimated sums voted by Council. This was a larger sum in proportion to their funds than the Council considered themselves justified in expending upon one item of their varied objects, but they became reconciled to this excessive outlay by the natural hope that as this costly apparatus was thus *perfected*, they would be enabled in the second year to extend their operations, and to distribute a larger amount of ova to their Members without anything like a similar outlay, as the building, cistern, water company's expenses, trays, stages, pipes, taps, gas fittings, &c., were all paid for; but at the commencement of the second season, in September last, a premonitory circular was issued as to certain requirements, viz., a hydraulic machine of some kind that might cost £60 or more, slate trays, &c., which were promptly declined by the Council, who at the same time begged the manager to confine his requisitions to absolute necessaries, to enable them to keep faith with their Members, and for this object a Sub-

Committee, consisting of three members of Council, was appointed, two of whom visited the premises with a builder employed by the manager, with a view to obtaining estimates for the necessary work. The expected estimates not having come to hand, the manager was applied to at the meeting of the Council, on November 4th, when he stated that a portion of the work was in course of execution, and in fact nearly completed. This being contrary to the intention of the Committee, it was thought necessary to appeal to the third member, who returned to town about that time, and who went to Twickenham and obtained estimates for various portions of the work which by the manager's orders had been proceeded with, and which was found to embrace the entire refitting of all the internal arrangements of the building, together with additions outside. At this stage two-thirds of the Committee protested against these, as they appeared to them to be, unreasonable requirements, the final amount of which could not be ascertained, but seemed to expand daily to a degree wholly incompatible, in their opinion, with the very limited funds entrusted to their guardianship. At a meeting of Council held December 6, 1864, a proposal was made to the manager that he should accept a fixed or limited sum as the best means of avoiding delay and disputes, but this or any other proposal for a limited expenditure was peremptorily declined by him, whilst at the same time he distinctly refused to undertake any other connection with the piscicultural operations of the Society than mere superintendence of the very expensive staff and means which he proposed at the time. At this stage of the affair the following resolution was come to by the Council:—"That, returning the thanks of the Council to the manager for his exertions in Pisciculture, it is the opinion of the Council that, considering all circumstances, the uncertain expense and tenure of the premises, it is advisable that the operations at Twickenham be discontinued, and that arrangements be made to carry them on elsewhere." Thus terminated the Society's piscicultural operations at Twickenham; and, as it was not then convenient to the manager to comply with the Council's request for the removal of their costly apparatus from his premises, it has not been possible for them to renew their piscicultural operations during the present season, which may be now considered nearly at an end.

The Royal Horticultural Society* having shown much goodwill towards the Acclimatisation Society, the Council have considered it desirable to authorise their Honorary Secretary, Mr. Waterhouse Hawkins, to enter into negotiations with the authorities at South Kensington for a grant of space to carry on their

* Tickets of admission to the Royal Horticultural Gardens to view the objects belonging to the Society, can be obtained by members of the Society on application to the Secretary at 3, Duke-street, Adelphi.

operations, and to erect their fish-hatching apparatus there, and so to insure the continuance of that essential branch of the Acclimatisation Society's undertaking during the ensuing season of the present year. It is, therefore, the intention of the Council to remodel their plan of action, and to reconstruct their fish-hatching apparatus. The mode of distributing the fecundated fish ova to the Members was by sale, at prices fixed in a tabulated tariff previously circulated to Members. The act of selling the ova at a supposed profit, however small, was felt by the Council to be more of a commercial feature than the constitution of the Acclimatisation Society fully justified, and they also found that it acted as an impediment to the desirable reciprocity and exchange of good offices with the French societies, who disclaimed giving their fecundated fish ova to persons who reared it for sale.

The following tabulated list will briefly show the numbers of Mammals and Birds that have been received at the Society's depot at Clapham, since the date of the Report for 1864, together with the number remaining there at the date of this report. Mr. Frank Buckland's detailed descriptions are attached, to complete the summary up to the 5th of May, 1865.

MAMMALS AND BIRDS IN THE ACCLIMATISATION SOCIETY'S DEPOT AT CLAPHAM, DURING 1864, AND UP TO MAY 5TH, 1865.

Received since the date of the Report for 1864.	Received.	Distributed.		Died.	In stock at Clapham, including animals received prior to 1864.
Romagna Cattle (presented by Lord Walsingham)	3	...	...	...	3
Spotted Cavy	1	...	...	1	...
Kangaroos	3	...	...	1	3 (bred 1)
Sheep (from Russia for Melbourne)	6	5	Rested, and embarked for Melbourne	1	...
Sambur Deer (from H.M. the Queen)	2	2	To his Grace the Duke of Marlborough	...	...
Pheasants (from China)	2	2	J. J. Stone, Esq.	...	3
,, (purchased)	10	10	Presented to Acclimatisation Society, Queensland	...	
Small Birds (purchased)	30	30	18 larks, 6 thrushes, 6 blackbirds, presented to Queensland	...	...
Emus	2	...	...	...	3
Talegallas	7	...	...	4	3
Prairie Grouse	7	4	To the Queen, a pair Earl Pomfret, a pair	1	2
Pigeons	16	17	...	4	22 (bred 6)
Ducks	7	8	...	1	...
Turkeys	...	5	...	1	6
Cranes	2	...	...	1	3
Quails	7	...	...	6	1
Partridges	3	...	...	...	3
Guan	1	...	...	...	3
Trumpeter	...	...	...	1	...
Indian Fowls	...	...	...	...	12
	109	83	...	22	67

Since that time, additional cages have been built in the Aviary at Clapham; and, by the action of the Committee for the Introduction of Game Birds, several useful birds have been obtained.

The Council continue to receive most encouraging promises of assistance from those gentlemen who possess local influence in China and Japan. These assurances of aid justify the Council in expecting to receive valuable consignments of birds of the hardier sorts that offer reasonable hopes of acclimatisation in Great Britain.

MEDAL.

Under this head the Council have great pleasure in announcing that at the Special General Meeting, held at the Royal Horticultural Gardens, on April 24th, a letter was read from Miss Burdett Coutts, in which she munificently offered the Society a die for a seal. A special vote of thanks to Miss Burdett Coutts was unanimously carried, and the Secretary was requested, in announcing it, to explain that a design had already been prepared, which would be submitted to her for her approval.

The Council have to return thanks, on behalf of the Society, to those whose names are mentioned below, for their services rendered to the Society during the past year:—

The Zoological Society of London.

The Imperial Acclimatisation Society of Moscow.

The Hudson's Bay Company, for Wild Rice and promise of assistance.

Miss Burdett Coutts, for Die for Seal.

Lord Walsingham, for Romagna Cattle.

Sir Stephen Lakeman, for gift of Siluri.

John Bush, Esq., for Prairie Grouse.

Higford Burr, Esq., for Pheasants, and for having undertaken the care of the Siluri for the Society.

The Rev. W. Smyth, for Dwarf Bamboo Seed.

B. WATERHOUSE HAWKINS,
Honorary Secretary.

ATTENDANCE OF MEMBERS OF COUNCIL FOR THE YEAR ENDING MAY 5, 1865.

Lord Tredegar	1
Sir Claude E. Scott	9
J. W. Malcolm, Esq., M.P.	6
Hugh Childers, Esq., M.P.	0
Higford Burr, Esq.	7
A. W. Crichton, Esq.	5
James Crowdy, Esq.	0
Francis Francis, Esq.	3
Jackson Gillbanks, Esq.	2
H. J. B. Hancock, Esq.	10
L. Mackinnon, Esq.	0
W. V. Morgan, Esq.	1
R. Marshall, Esq.	0
M. J. O'Connell, Esq.	0
John J. Stone, Esq.	3

Mammals.

Since the issue of the last Report the following living specimens have come into the possession of the Society:—

In October, 1864, Lord Walsingham presented to the Society three very handsome specimens of the Romagna cattle, viz., two bulls and a cow, the cow being in calf. The animals were consigned on their arrival to the proprietor of Belsize Farm, where the cow calved, but the calf unfortunately died. They were afterwards taken to the paddock of Mr. Bush, where they are at present. It is worthy of note, as proving that their temper is good, that the man who brought these animals to Mr. Bush rode on the cow and led the largest bull. The cow is of an iron grey colour blending into black. The larger bull is also iron grey, with exceedingly handsome black legs and black forehead, has a very heavy dewlap and a magnificent crest, and is altogether a very handsome animal.

The horns in all three specimens are well put on, and very handsome in appearance; the beasts are all characterized by the lightness of the hind quarters, showing that they are not far removed from the wild stock; they seem to be quiet creatures when not disturbed, and would certainly form highly ornamental animals in a park well closed in with railings. It is proposed to cross them with the common cow.

SAMBUR DEER.

In Windsor Great Park, for some time past, has been roaming a herd of Sambur Deer (*Rusa Aristotelis*). It having been determined by Her Majesty that these deer should be removed, they have, through the interest of Capt. Dawson Damer, been most graciously presented to the Society through General Seymour, Ranger of Windsor Great Park; they consist of a stag and hind. The Sambur is an exceedingly fine kind of deer; the horns are not so ornamental as those of the Red deer, but still of an elegant shape. They are best suited for forest land, and especially low-lying countries. These animals have been transferred to the park of his Grace the Duke of Marlborough, at Blenheim.

WAPITI DEER.

Lord Powerscourt's herd of Wapiti are still doing well; he reports that they have not yet bred, but they are very hardy and thrive as well as possible. His Lordship also informs me that his Japanese deer are in excellent health and have bred in his park.

CHINESE SHEEP.

The remaining specimens of the original stock having died out during the winter, it is only possible to report on the various specimens of the cross breeds. The Chinese Sheep require greater warmth and dryness than could be obtained for the

last flock, and, if those conditions could be supplied, the nature of the wool, from its silky, hair-like character, might be rendered a valuable substitute for alpaca or vicuna, but the general figure of the animal does not promise favourably for the requirements of the butcher. Mr. Bush has, at this moment, several crosses between the Chinese Sheep and the Oxfordshire Southdowns; these hybrids can be seen at Mr. Bush's paddock. Mr. Stone and other gentlemen have also carried out successful experiments in crossing these Chinese sheep with English breeds.

ROMANOFF SHEEP.

On the 2nd of April were sent from the Imperial Society of Moscow six sheep, viz., one ram and one ewe of the Kalmuck breed, and one ram and three ewes of the Romanoff breed. During their sojourn at Clapham, one female of the Romanoff breed died from tuberclous disease of the lungs, &c. These animals were presented by the Imperial Society of Moscow to the Melbourne Acclimatisation Society, and, at the request of the latter Society, were taken charge of by the English Society, in order to recover strength previous to their undertaking their long journey to Australia. The Council congratulate themselves upon thus being enabled to show some slight attention to the acclimatisers of Russia and of Australia, and trust by such friendly acts of mutual accommodation as regards the shifting of animals, &c., to foster that spirit of friendly reciprocity which ought to exist among those who wish to forward the cause of acclimatisation in all parts of the world.

SPANISH ASSES.

One of our members, J. W. Buckland, Esq., has obtained for the Acclimatisation Society of Queensland two exceedingly fine specimens of asses from Catalonia. The male is three years old, nearly fifteen hands (67½ Catalonian inches) high; the female is of the same age. They are exceedingly handsome creatures, and likely to be of service in introducing a new and valuable breed of these animals to our friends in Queensland. The asses arrived in London May 15, and are now resting for a while at the Zoological Gardens, previous to undertaking the voyage to their new home.

KANGAROOS.

The Society have now three specimens of Kangaroos in their possession. They are of the smaller kind, or Bennett kangaroo. They were presented through Mr. Frank Buckland to the Society by a friend of his, who brought them with him from Australia. They were originally three in number, but one of them has died. This, however, has been replaced by a young one, which was born

on Mr. Bush's premises on October 18, 1864, after, as is supposed, one month only of internal gestation. Mr. Bush has been enabled to make some valuable remarks upon the mode in which the female carries her young in the pouch.

His Grace the Duke of Marlborough has also a small herd of four kangaroos at Blenheim-park. He has placed them in an enclosure guarded with wire, and they thrive exceedingly well. It is proposed, when the female at Mr. Bush's is in a fit condition, to transfer her to the Duke's.

There can be no doubt whatever that kangaroos will form very highly ornamental animals in closed spaces, &c., if the trees be guarded from their gnawing. They are exceedingly tame and very amusing in their habits.

They will breed freely in England, as has been proved not only in the case of our own animals, but by numerous young ones born at the Zoological Gardens; and the observation of the process of the mother carrying the young in the pouch will alone repay any care and attention bestowed upon the animals.

Australians tell us that the kangaroos are very good to eat, and should their acclimatisation be continued, it may be hoped that they may be found useful as food, or at least as a new kind of game.

Birds.

WONGA WONGA PIGEONS.

The Society has now in its possession ten Wonga pigeons, at the present date, April, 1865. A pair has made a nest in a lilac tree. They are very peculiar in their habits, uttering a melancholy, but at the same time not unpleasant coo. They seem to be ground-loving birds, though they roost invariably in trees; and it is possible that, were they to have plenty of space and a low underwood, they might be induced to breed. A pair of these were entrusted (May 10, 1864) to Dr. Bull, of Hereford, who reports as follows:—

"Hereford, April 13, 1865.

"Dear Sir,—I am glad to be able to send you a favourable report of the Wonga Wonga pigeons under my care. They are now in fine plumage and health, very lively, and certainly less wild than when they came here.

"One of the birds sent last summer died, from disease, in December, the other has passed very well through this long, trying winter, without any other protection than a piece of matting on the top of the aviary. Mr. Bush, with

the consent of the Council, was kind enough to send me another bird, about a month since, to replace the one that was lost, and I have great hopes that the change will be fortunate. The two, last summer, though they did not quarrel, certainly did not show any particular friendship for each other. These birds are much more sociable. They plume each other's feathers, most often side by side, follow each other about, and thus give me great hopes that they are really a pair, and that as the spring advances their friendship may ripen into love. (It is very perplexing that there should not be any difference of plumage to mark the difference of sex.) There can be no doubt now that these Wonga Wonga pigeons will bear our climate well. The past winter has not only been very long and severe, but the changes of temperature have been remarkably sudden. This was particularly the case all through January, and on the 29th of this month, when the thermometer had registered $3\frac{1}{2}^{\circ}$ above zero in the night, it rose during the day to 35°, making a difference of temperature in 12 hours of no less than $31\frac{1}{2}$ degrees. Whether they will breed in confinement, or like our own wood pigeon resent all interference with their freedom with unconquerable pertinacity, yet remains to be seen.

"Believe me to remain, Dear Sir,

"Yours faithfully,

"HENRY G. BULL."

Mr. Hancock has also two pairs of these Wongas. He reports of them that they are in good health, but they have not yet bred. He observes that they are very partial to vegetables and fruit.

BRONZE-WINGED PIGEONS.

There are in the possession of the Society seventeen Bronze-winged Pigeons; one of them arrived on the 20th March, two on the 23rd February, two on the 4th January, the others having been in previous possession of the Society. The Council are happy to be able to report that the Bronze-wings have bred under the care of Mr. Bush. On the 4th July, 1864, there were two nests of Bronze-wings, and a pair of young birds in each nest; they subsequently made more nests; at one time there were three nests in use all at the same time.

We have a favourable report of these birds from Guernsey.

These Bronze-wings are exceedingly handsome birds; under favourable conditions, and if left quiet and undisturbed, they will probably breed to a large extent, and the Council trust that one of these days these Bronze-winged Pigeons may become common throughout the country, as they are quick in their flight, and therefore would be valuable game birds.

Bronze-winged Pigeons have been entrusted to Mr. Stone, 20th March, 1864; and one pair to Dr. Bull, of Hereford.

GUANS.

The Society has in its possession three Guans. All experiments they have instituted in getting these birds to breed in this country have failed; even in their native country (South America) they will not breed in poultry yards under the most favourable circumstances.

The Society think it right to make this known, in order to save future experiments, time, expense, and trouble.

It is very much to be regretted that these birds, which would form such a valuable addition to our poultry yard, should resist all the efforts made hitherto to induce them to multiply their species.

NATIVE COMPANIONS.

The birds mentioned in the last report still continue to thrive; they are exceedingly tame and highly ornamental, and fully bear out their name of Companions. They are about 4 feet 6 in. high, and allow themselves to be handled, and are apparently very proud of being noticed; they often perform the most amusing antics. They spend most of their time going about searching for grubs in the root of the crow-foot (*ranunculus*), of which they are very fond.

TALEGALLAS.

Since the last report the Society regret to say that they have lost two specimens of talegallas, the cause of death in both instances being enlargement of the liver from some unknown cause.

Two talegallas were shipped from Brisbane, Queensland, by the *Flying Cloud*, one of which died on the voyage. A companion to it, however, was purchased from a passenger in the *Flying Cloud*.

On the 2nd August three talegallas were received from Brisbane, per ship *Wansfell*; four birds were placed on board the vessel in Australia, but one of them was washed overboard.

On the 31st of August, one of these died of an injury to the bill; the Society has now in its possession three specimens, and the Council regret to say that the birds have not yet bred. They have, however, scratched up a mound, according to their curious habit, and if they do not breed this season, we trust for better fortune next year.

PRAIRIE GROUSE.

On February 20th, Mr. Bush received, per ship *Peruvian*, as a present from Mr. Simms, of Montreal, a consignment of seven Prairie Grouse, four cocks and three hens; the birds arrived in excellent condition, and are at this moment very healthy, one only of them having died. It is remarkable that these birds perch at night, and are by no means shy. It is trusted that, as they have already bred in England, the specimens now introduced may also multiply their species. Her Majesty has been graciously pleased to accept a pair of these beautiful birds, and they have been entrusted, by Messrs. Hawkins and Bush, to the care of Mr. Cole, head-keeper of Windsor-park.

HONDURAS TURKEY.

The Society has now a flock of eight Turkeys from Honduras, five cocks and three hens. These birds have progressed very favourably; they have been distributed as follows:—On March 16th, one bird to Sir Claude Scott; on March 3rd, one to Miss Stevenson, of Exeter; and on February 4th, another bird to Lady Grantley; also a pair to Mr. Malcolm. These birds were, when originally received, supposed to be a cross between the Ocellated and the Common Turkey. This, however, time has proved not to be the case. Mr. Malcolm reports that the birds in his charge crossed with the Canadian Wild Turkey; owing, however, to a very damp season, the chicks have unfortunately perished. There can be no doubt that the introduction of this flock of birds straight from Honduras, must be beneficial to the flocks of those individuals who have taken charge of them, introduction of new and pure blood being always a great desideratum in obtaining a good head of animals, whether mammals or birds.

EMUS.

There are now in the possession of the Society four Emus. These birds are exceedingly tame, and form a very pretty group on the lawn or paddock. They run like race-horses, with a very peculiar and amusing action. As yet there have been no produce from these birds, though every effort has been made to obtain pairs. Three birds have been kindly lent for this purpose. There are also Emus in the possession of other members of the Society, viz., the Duke of Marlborough and Samuel Gurney, Esq., at Carshalton. The Duke has no less than four young and two old specimens of these birds. He keeps them in a corner of his park, well adapted to their habits. The Society will be pleased to hear that a pair of these birds have bred this year, and have laid no less than nine eggs: it is hoped they will hatch out properly. The Duke has made some curious observations relative to the habits of these birds during the breeding season.

Mr. Samuel Gurney also has three Emus and one Ostrich; the male Emu is excessively hardy, and remained out in the paddock all last winter. After snowy nights he was frequently found enveloped in snow, with his head and neck alone protruding, so that he looked like a great snow heap. The Ostrich also, although a bird naturally accustomed to the hottest climate in the world, has held out during the whole of last winter; he, like the Emu, does not seem to care for the frost and cold.

Unfortunately, Mr. Gurney has not been able to procure a mate for his Ostrich; could this be done there is every probability of

these birds breeding. The experiments hitherto carried on with Emus have been highly satisfactory in every way.

DEMOISELLE CRANE.

The Society has also in its possession two remarkably fine specimens of the Demoiselle Crane, received from Hamburgh, Dec. 12, 1864, a highly ornamental and graceful bird: the plumage about the head of this bird is remarkable for its elegance and peculiarity of form.

These birds were graciously accepted by Her Majesty the Queen, but a few days previous to their being sent to Osborne the female was unfortunately killed, unintentionally, by a labourer working in an adjoining paddock: the Society will continue to make every possible endeavour to replace it.

PHEASANTS.

From China were shipped, late in the year 1864, three silver and three gold pheasants, out of which only two arrived alive, on the 31st of December last; these have been entrusted to the care of Mr. Stone.

The Society have also at their Aviary at Clapham one specimen of the Rufus-tailed or Firebacked Pheasant, which has been placed with female specimens of common pheasant, with a view to obtaining a hybrid.

By the action of the Sub-Committee for the Introduction of Foreign Game Birds, the Society has acquired by purchase three fine specimens, one male and two females, of a cross between the Versicolor and Torquatus Pheasants; these birds are doing well, and justify the expectation that they will increase and multiply. Also, a fine male pheasant, with seven-eighths of the characters of Reeves Pheasant, is placed with three females of the common Pheasant. All these birds are perfectly healthy, and in good condition, in the Society's additional Aviaries recently built at Clapham.

SHIPMENTS TO AUSTRALIA.

In the month of November last, by order of the Council, there were sent for presentation to the Acclimatisation Society at Brisbane, in the ship *Wansfell*, the following birds:—

10 Pheasants.
16 Thrushes.
6 Blackbirds.
18 Larks.

This consignment was provided with every possible requisite for their safe passage—separate cages, as well as a proper quantity of

food necessary for the long voyage. It is not yet known whether these arrived in safety.

J. W. Buckland, Esq., on the 5th of April last, sent to Brisbane, per ship *Sirocco*—

4 cock
8 hen } Pheasants,

Presented by R. S. Holford, Esq., M.P. Mr. Buckland sent by the same ship, also to Brisbane, four Partridges.

FISH CULTURE.

Although the Society has discontinued their piscicultural operations for the present season, the Council beg to inform the Society that one of their members, Mr. Frank Buckland, has continued operations on his own account, and this on a pretty large scale. At his own expense he has erected an apparatus in his front kitchen in Albany-street, and has therein operated upon upwards of 30,000 ova of the Salmonidæ. By means of this apparatus he has been enabled to establish a system of interchange of eggs with various gentlemen, viz., Mr. Coumes, of the Piscicultural Establishment at Hunnegul; Dr. Scheam, Director of the Botanical Gardens, Brussels; Mr. Adam, of Aberdeen (who is hatching fish for the rivers Dee and Don); with Mr. John Miller, of the Galway Fishery, in Ireland; with Mr. Alexander Miller, the Superintendent of the Salmon Fisheries of the Wye; with Mr. Porter, Secretary of the Angling Club at Sheffield; and with Mr. Peter Harrison, of Keswick.

Mr. Buckland has also established a large set of boxes at the Royal Horticultural Gardens, on behalf of the authorities of the South Kensington Museum, in which large numbers of Trout, Salmon, etc., have been hatched, and are now exhibited.

The Salmon hatched last year are doing exceedingly well. A large and commodious trough has been built for them, and it is hoped that when they assume the smolt stage some experiments will be carried out relative to the change a smolt undergoes when passing from fresh to salt-water.

Mr. Buckland has also distributed eggs and live fish to the Zoological Gardens, Regent's-park, the Crystal Palace, &c.

Mr. Buckland has also been commissioned by General Seymour, Ranger of Windsor Great Park, to establish a series of boxes in the Park, with a view to stocking the lakes there. In consequence of the miscarriage of a letter from the General, in the early part of the season, the operations at Windsor will not be on so large a scale this year. It is hopedthat in the forthcoming season great improvements will be made. The Members will be

pleased to hear that several private gentlemen have erected fish-hatching apparatus, with very fair success.

Mr. Higford Burr, of Aldermaston-park, has been particularly energetic in this matter. Mr. Burr reports as follows :—

OPERATIONS IN ARTIFICIAL FISH-BREEDING.

(To the Editor of the *Berkshire Chronicle.*)

Sir,—On Feb. 10th, 1863, accompanied by Mr. Buckland, I let the water off a pond in which there was a good store of trout, but I was much disappointed at finding nearly all the fish had shed their spawn, and in consequence I obtained but very few ova; these I placed in the hatching-troughs, and they ultimately turned out very well. In order that I might not be thus foiled the ensuing season, I took the precaution of examining the trout in the same pond on Dec. 1, 1864, and on this occasion I found neither a single ripe female nor any promising to be so for several weeks. I kept a few for the purpose of observation in some stews, with a stream running through them; and when I thought the proper time was arrived, I fished the pond again in Jan. 7, and was so fortunate as to obtain several thousand ova; at the same time I also placed several brace of promising fish in the stews above mentioned. Owing to the drought of last summer and autumn, the usual quantity of water was not running into the pond, and I presume it was owing to this that the fish were so backward in spawning as compared with the previous season. On Jan. 20 I obtained a further supply of ova from the fish in the stews, leaving a few females still unripe, and these were not fit for spawning until Feb. 25, when I operated on all that remained. I am glad to report that all the ova in the troughs are looking very well, though it may not progress so fast as in some other places, which may be accounted for by the temperature of the water being but 41° Fahr. I think I may now venture to say that I have satisfactorily proved these two facts—that although trout do not generally breed in ponds, they still get into good spawning order in them, and that it is very easy to transfer the fish from these to the stews, where they appear to ripen as well as if at large. It remains to be seen how many successive years I shall obtain a supply of ova from the same store-fish, and if I may calculate on this for five or six years, it will render pisciculture far more easy than were I to get the spawn from a trout taken from a running stream, as the process of fishing a pond is so very much easier. I placed last year in a small pond some hybrids produced from the ova of the sea-trout and salmon, milted by common trout. This spawn was kindly sent me by Mr. T. Garnett, of Clitheroe, and the young smolts are now about six inches long. I have given a few to Mr. F. Buckland, who has placed them either in the Zoological or the Horticultural Gardens.

I remain, yours very obediently,

HIGFORD BURR.

Aldermaston, March 10, 1865.

H. Early, Esq., of Witney, and T. L. Broughton, Esq., of Almington Hall, Market Drayton, as well as other Members of the Society, have also obtained good results during the past season, in their piscicultural operations.

SILURUS GLANIS.

The Council have very great pleasure in reporting that they have at length succeeded in obtaining living specimens of this fish,

which, it is trusted, will prove such a great addition to our ponds and lakes. In the month of January last Sir Stephen Lakeman, who resides near Bucharest, called upon Mr. Buckland and offered eleven living specimens of the Silurus, provided that he could find any gentleman who would devote a pond entirely to them for their protection and rearing. Mr. Buckland immediately communicated with Mr. Burr, who at once placed at his disposal a pond with a stream running into it, admirably situated for the purpose. On the 27th day of January Mr. Buckland took these fish to Aldermaston, and turned them out in the pond. Of course in this short space of time we cannot tell very much about their progress. Mr. Burr, however, reports that on various occasions, a portion of a rabbit having been placed in the water, by way of experiment, it was found that the fish had been feeding greedily off it—a hint that wasnot thrown away by Mr. Burr, who has since caused these fish to be fed regularly. The Siluri, when turned in, were about a quarter of a pound in weight each, and about fourteen inches in length; they grow in their native country very rapidly, and specimens are found up to four or five hundred weight. On the 15th day of September, 1864, thirteen specimens of the same Silurus were brought over by Sir Stephen Lakeman, and placed in the custody of Mr. Francis Francis, at Twickenham, on behalf of the Society. The ownership of these fish, we regret to say, is now disputed.

An admirable account of the Silurus, from the pen of the learned Ichthyologist, Dr. Gunther, of the British Museum, can be found in the *Fisherman's Magazine*, No. 11, for November, 1864. Chapman and Hall, Piccadilly.

Mr. Buckland has received a specimen of a head of a Silurus from Dr. Jager, of Vienna. Even in its dry state this head measures 1ft. 2in. in length, and 2ft. 11½in. in circumference.

THUNDER FISH.

Sir Stephen Lakeman has also been kind enough to present to the Society several specimens of a curious kind of pond fish, called the Thunder Fish. It is a species of Loach, and will probably do well in ponds. These fish have been set free in a pond well suited to their well-being in Mr. Burr's park, at Aldermaston.

SILKWORMS.

Through the kindness of Monsr. Ramel, a consignment of the eggs of the Yamma Mai Silkworm has been received by Mr. Bush. These worms feed upon the leaves of the common oak. The season is as yet hardly advanced enough to report with any certainty upon the probability of their succeeding in this country, but

they have hatched out very healthily, with a vigorous appetite for oak leaves, showing a decided preference for the English oak, which, with the indefatigable and skilful care of Mrs. Bush, promises successful results, so far as a small number can indicate. The Ailanthus Silkworm continues to do well under the charge of Lady Dorothy Nevill.

FRANK BUCKLAND, Naturalist Manager.

BALANCE-SHEET FOR THE YEAR ENDING 4TH APRIL, 1865.

RECEIPTS.

	£.	s.	d.
Balance in hand	438	8	11
„ left with Clerk, May, 1864 ..	16	3	0
Donations and Life Members	135	1	0
Subscriptions, including Guernsey Branch ..	223	0	0
Game Bird Fund, up to April 4	136	12	0
Unexpended Sum (Messrs. Matheson and Co.) ..	56	10	5
Fry and Ova	11	10	6
	£1,017	0	10

EXPENDITURE.

	£.	s.	d.	
Printing, Stationery, Postage Stamps, &c., &c. ..	66	4	6	109. 10. 5
Expenses, Animals' Food, Purchase, Fees, Cages, &c., &c.	153	15	11	175. 7.
Clerk's Salary	110	12	0	263. 16
Rent of Offices to Lady-day	39	1	0	~~86~~ ..
Housekeeper's Expenses, Firing, Gas, and Incidentals	18	7	3	24. 1. 9.
Balance with Clerk	2	15	6	
„ at Bankers	626	4	8	
	£1,017	0	10	

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Examined and found correct,

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2nd May, 1865.

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GUERNSEY BRANCH OF THE ACCLIMATISATION SOCIETY,

1865.

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APPENDIX A.

THIRD ANNUAL REPORT OF THE GUERNSEY BRANCH OF THE ACCLIMATISATION SOCIETY.

December 28th, 1864.

The Bailiff, Sir Stafford Carey, *President*.

The Committee have the pleasure of submitting to the Members of the Society a Third Annual Report of the proceedings of the Guernsey Branch. It is satisfactory to observe that the efforts made in this Island to carry out the objects of the Society meet with the full approval of the Council; that special thanks have been voted to some of our Members; and that the account of our last year's proceedings was deemed of sufficient interest to be appended, *in extenso*, to the Fourth Annual Report of the Parent Society.

The Committee beg to announce that, since the last General Meeting, on the 30th of December, 1863, Colonel Priaulx, Aide-de-Camp to Her Majesty, the Rev. Richard Ozanne, Rector of St. Andrew's, and Edward Collings, Jun., Esquire, have joined the Branch Society, the number of whose members now amounts to nineteen.

OYSTER CULTURE.

It will be recollected that, at one of our meetings last year, some "collecting tiles," covered with oysters in various stages of growth, which had been brought over from Brittany by Mr. Lowe and Mr. Tupper, were submitted to inspection, and that a Sub-Committee was appointed to devise measures for promoting the establishment of oyster breeding on our shores. The tiles above-mentioned were afterwards exhibited publicly, and attracted much attention from fishermen and other persons. The immediate consequence was the formation of a number of oyster companies, who presented petitions to the Royal Court for grants of allotments on the fore shores of this island in order to construct thereon some experimental oyster breeding parks. Owing to these applications, Mr. Tupper was delegated to inspect various localities, to apportion the allotments required, and to report on the subject. That gentleman's reports were submitted to the consideration of the Royal Court during the months of March and April of the present year. Under certain rules and restrictions, the requests of the petitioners were granted, and Her Majesty's Receiver-General, being then applied to, granted leases of certain portions of the fore shores, at a moderate rental, to about twelve or thirteen companies.

From this period, it may be said, the art of oyster culture began to assume a practical shape in this island. The lessees set to work at once in building enclosures on some of the allotments, and deposited therein considerable quantities of full-grown oysters, together with materials calculated to arrest and collect any spawn that might be produced.

The presence of oysters growing naturally on stones and other surfaces in many of our bays, leads to the conclusion that the oyster does cast its spawn, to some extent, in the waters immediately surrounding this island. It is reasonable, therefore, to assume that, if proper collecting bodies are placed within range, the embryo oyster will adhere to them.

"The term in use for such collecting bodies," as we learn from Mr. Lowe's lecture before the Society of Arts, "is *cultch*, and as soon as the oyster spawn attaches itself to any such surface, or is of a size to be readily seen by the naked eye, it is denominated *spat*, which, passing through its intermediate stages, and increasing in size, becomes an *oyster*. When full grown, it is said to throw off from one million to two millions of eggs; but, notwithstanding this extraordinary fecundity, a very small portion survives the danger to which the spawn is exposed. To protect these embryos, to give them opportunities of fixing themselves on firm points of adhesion where they may grow, to shelter them from waves, sea-weed, mud, natural enemies, and all other dangers which threaten them, such are the objects to be kept in view by the oysterculturists."

The sub-Committee, each member taking an assigned district, have recently visited the different oyster-parks on this coast, and they have the satisfaction to report that most of those to the north and north-east have sustained no material injury, and that the cultch deposited therein remains undisturbed, notwithstanding the tempestuous weather which occurred in the month of November. It must be stated, though not without regret, that the parks near Roquaine Bay have been much damaged by the sea. This fact leads to the suspicion that they must have been originally defective in construction, as parks with a similar exposition at the Isle de Ré have for many years resisted the full force of the Atlantic wave.

The few tiles and slates that have been examined contain zoophytes and small testaceæ innumerable, but it would have been injudicious to disturb the cultch extensively at this period. In the course of the ensuing spring, the proprietors themselves intend to make a thorough examination; until then no correct idea can be formed as to the results of the experiments in progress.

It is evident, from the fact already stated of oysters being found growing naturally on different parts of the coast, that the waters in our vicinity are favourable to their propagation. The fishermen look upon these "natives," as they may fairly be called, as spurious, but such is not the case. Their shells, it is true, are in most instances deformed, owing to the inequalities of the granite surfaces to which they adhere; but the flavour of the mollusc itself is excellent, and, if properly nurtured, would prove as good eating as any of those brought into our market. But, unfortunately, such oysters are not generally esteemed, and fetch a comparatively low price in other markets. On this account it would be desirable for our experimentalists to procure the more valuable varieties of oyster for stocking their parks; and the opportunity for so doing is afforded by the Parent Society. The Council, some time ago, offered to furnish us with Colchester oysters and their spawn; and, in the last annual report, referring to oyster culture in Guernsey, they offered the following suggestions, viz.:—"That in attempting these experiments it would be as well to pay attention to other species besides the "natives" of Great Britain; for instance, the American oyster, and also those of the Cattegat."

The sums expended in this place in the construction and stocking of oyster-parks are by no means inconsiderable in the aggregate, but time must elapse before an adequate return can be expected, especially as the seasons have of late been unfavourable to the development of oyster spawn.

In the course of the last autumn, Mr. Frank Buckland visited various oyster-breeding grounds on the coasts of Great Britain, and everywhere he heard the same report, viz., "a bad spat this year" in some places, and in others, "none at all." The same unfavourable account awaited him when he visited Isle de Ré. "On the west coast of Ireland," says Mr. Buckland, "a careful examination of the dredges informed me that here also the fall of spat was below the average. On the cultch, however, I discovered a large number of what might easily be taken for oysters, and these shells were indeed shown to me by the fishermen as young oysters; they were, in fact, the young of a species of anomia, or, in vulgar parlance, 'crow,' or 'saddle-back oysters,' and of course perfectly useless as human food."

These last remarks coincide with the observations of the sub-committee in the parks of this island; but, in their opinion, it does not follow that the anomia exists to the exclusion of the true oyster. It is, however, a matter of great importance to have ascertained that well-constructed enclosures and their contents remain uninjured and undisturbed in spite of the severe storms that have lately occurred.

FISH CULTURE.

It is satisfactory to be able to state that systematic experiments in the naturalization of fish have lately been undertaken. The well-known ponds near the Vale Church, into which sea-water is admitted every tide, mingling with streams of fresh water constantly flowing from the land, attracted the attention, many years ago, of the late Dr. MacCulloch, F.R.S. Mr. Lowe, also, on his first visit to Guernsey, considered the pond admirably adapted for experiments, and likely to prove highly lucrative in supplying fish for the market when the weather was too strong for boats to put out to sea.

For a long period this promising sheet of water, containing a happy family of grey mullet, plaice, flounder, fresh-water eel, and other fish, had been neglected by the owner, although poached with great profit by other individuals.

This pond was purchased a few months ago by Mr. Edward Collings, our newly-acquired member, who is sparing no expense to render it of practical value. Its boundaries are now virtually increased by cleansing and deepening its banks; the fresh water courses are grilled so as to prevent the escape of small fry; the premises are protected by high walls; and a good look-out is kept, which sets poaching at defiance. Great varieties of flat fish and other sorts have been introduced for the purpose of re-production, and there is a fair prospect that the pond will fulfil the purpose for which it is so well calculated:—viz., the breeding and multiplying of fish.

It may here be suggested that there are other ponds in this island, which, with a little trouble and expense, might be rendered equally valuable.

BIRDS.

As regards the Currasow, H. O. Carré, Esq., Lieutenant-Bailiff, reports as follows to the Honorary Secretary:—

"Valnord, December 20th, 1864.

"In reply to your inquiries respecting the Currasows, I have to state that they continue in excellent health and condition up to the present time. I am sorry to be obliged to add that the female has laid no eggs, and has shown no disposition to breed. The male, for two months or upwards last spring, say from about the middle of March till near the end of May, showed a marked alteration of character, and became irritable and savage to a degree quite extraordinary in a bird usually so tame and peaceable. He seldoms allowed people to pass him without immediately attacking in the rear. If they faced and threatened him, he invariably ran away, but returned most perseveringly to the charge the moment their back was turned. He never succeeded in hurting anybody, it is true, but these constant assaults were rather annoying, especially to the female members of the family. All this time he showed the greatest dislike to the hen bird, maltreating her whenever he had an opportunity, and repeatedly driving her quite away from the place.

"I suspect that the female is rather old, and I have little hope of ever obtaining eggs from her. Nevertheless, I have no objection to try the birds for another season, though I cannot say I anticipate any better result than I had last spring.

"H. O. CARRE."

The Rev. W. T. Collings, Seigneur of Sark, addressed the following statement to Dr. Hoskins :—

"Sark, December 10th, 1864.

"I have little to report respecting the Wongas. They are, however, in excellent health, but continue to be very shy, hastily concealing themselves on the approach even of their ordinary feeder. In the hope of inducing them to breed, I caused bushes to be planted, and thick Austrian pines to be placed within their wire-netted enclosure. They evidently enjoy the retirement which this screen affords them; and yet they are almot always on the ground, seldom on branches more than three or four feet from the surface, and never on the upper perches.

"Some months ago I placed a pair of tame pigeons with them, hoping that this would give the Wongas more confidence, set them an example, and perhaps induce them to breed, like the others, in the spring, but no such result has accrued.

"As I have plenty of space, and some peculiar advantages, of which you are aware, in respect of climate and isolation, and, as I intend to spare no expense in providing suitable accommodation for birds and animals, I beg you will assure the Council of the Parent Society of my readiness to undertake the care of any objects for experiment which they may think fit to entrust to my charge.

"The seeds you gave me at the last Annual Meeting are growing well. The Elephant grass has sprung up; the Nardoo, of which I received but one seed, has yielded a strong plant, and I have at least a dozen of cotton plants, one of which has bloomed.

"W. T. COLLINGS."

THE AILANTHUS SILKWORM.

The hope expressed in our last report, that experiments with the *Bombyx cynthia* would be carried a step further during the spring of the present year, has been fulfilled; and another step in advance would have been gained but for a series of untoward circumstances. In spite of these accidents, however, the essential fact is established, viz., that the *Bombyx cynthia* is capable of free propagation in the open air in this climate, and that in the proper season the supply of its natural food is without limit. Moreover, much experience has been gained in spite of failure, and perhaps in consequence of partial failure.

In the month of October, 1863, ten cocoon, which had been spun in Mr. Willis's nursery-grounds, were carefully collected and preserved. On the 11th of March ensuing, Dr. Collings, who has great experience in the management of Silkworms, and was provided with a couple of Ailanthus shrubs, kindly undertook the charge of the above-mentioned cocoons. The following note gives details of his proceedings :—

"Wednesday, 23rd June, 1864.

"My dear Dr. Hoskins,—Our experiment with the Ailanthus Silkworm has come to an untimely conclusion. Yesterday evening I was in possession of thirty-nine fine worms already commencing their first change. This morning only one can be found, and that one lying in a disabled state upon the ground. The cocoons you brought to me I left in my study facing south, and on the 18th May, after several warm days, I found that three moths had already come forth; one of them was dead, with its wings undeveloped and imperfect; another, judging from its battered appearance, had been out some days, and was very languid; both of these were males. The third, a female, was in full vigour and quite perfect, but on the 20th the wings were battered and her activity diminished, nevertheless she commenced laying, but her eggs were unimpregnated.

"On the 21st, another fine female appeared, and on the 22nd an active male. In a few days the former laid many eggs, which were perfectly fertilized, and on the 12th of June these eggs began to hatch.

"Some difficulty was experienced for the first few days in feeding the worms upon leaves detached from the trees; many of them died in consequence of the rapid withering of the leaves, although standing in water. On the 16th of June, I therefore placed the remaining worms upon a tree. The more vigorous soon sought appropriate places, and began to feed heartily, the weaker died and dropped off. The worms which survived attached themselves to the under surface of the leaves, and were protected during heavy rains which fell about this time. I afterwards placed the tree in the conservatory, which is cool and well ventilated, but, unfortunately, a pair of robins had built their nest in a citron tree against the conservatory wall, and, not discriminating between the *Bombyx cynthia* and the common worm, destroyed all our hopes and expectations.

"ADOLPHUS COLLINGS."

As a set off against these disappointments, a fresh supply of eggs, which had been procured for us by the Council, was received by the Honorary Secretary of the Branch on the 17th of 1st July. A portion of this welcome and timely consignment was placed at once in Dr. Collings's hands, and the remainder was committed to the care of Mr. Willis, who conducted the first experiment so successfully, and, in anticipation of a fresh crop of worms, had planted several rows of Ailanthus shrubs.

On the 1st of August, about twenty-five fine worms were placed upon the shrubs, and carefully protected by means of gauze netting. They began to spin on the 20th of the same month, and continued to do so, unaffected by a strong gale and heavy rain which occurred on the 24th of August.

On the 7th of September, ten cocoons were gathered; another was found a few days after on an Ailanthus at a considerable distance from the hedge, but close to the spot on which the worms were placed last year; three more were obtained on the 21st, and the whole, amounting to fourteen cocoons, were preserved.

The eggs entrusted to Dr. Collings hatched in due course, and the worms were placed on shrubs in his conservatory. But another enemy, in the shape of ants, destroyed all the worms that he had reared, except one solitary individual, which spun a cocoon in great perfection.

Two of the fourteen cocoons produced in the open air were unexpectedly developed into moths as early as the 23rd of October, and in a few days another moth made its appearance. From these three precocious moths a number of fertilized eggs proceeded, and are carefully preserved in a cool place by Dr. Collings. On the chance of any worms being hatched prematurely, a few Ailanthus shrubs have been planted in a forcing-house.

The plan originally adopted by Mr. Willis, that of planting the Ailanthus so as to form low thick edges, is by far the best, as the worms are enabled to wander from one plant to another, and the whole can be easily protected by means of horizontal piles, supported by cross stakes, over which netting can be spread and secured so as to form a sort of tent. This plan is found to be the one subsequently recommended by Dr. Forgemol to the French Société d'Acclimatation.

As the result of our own experience, it may be proper to state that the cocoons, during their formation, should be carefully watched, and removed from the plants as soon as ever the spinning process is completed. If allowed to remain longer than ten days on the shrubs after spinning has begun, the cocoons shrivel and loose their vitality. The open-air experiments are fortunately the most successful.

The following remarks, lately addressed to Dr. Hoskyns by a gentleman at Salisbury deeply conversant with silk cultivation and manufacture, are very interesting and suggestive :—

"I have introduced a notice of the *Bombyx cynthia* as a silk-producing insect in some lectures recently delivered by me, and I am convinced that this branch of industry may be most profitably introduced into our Union workhouses. There is a large amount of labour wasted, simply because it has not been profitably applied. Plant, therefore, the Ailanthus shrub, and let the women and children attend to the worms. Pay them a per-centage upon the result, and divide the inmates into sections, so that there may be honest rivalry. The sections would be stimulated to exertion by the personal interest each individual would have in the result, and section would soon compete with section for superiority. I see no reason why, in Reformatories, Penitentaries, and the like, some effort should not be made to rear these worms. In fact, wherever there is unapplied child or female labour it can be advantageously introduced. The ratepayers would not alone benefit; habits of industry and method would be insensibly taught, and with care, the present pauper might become a silk grower either for the capitalist or on his own account."

The above suggestions appear to be well worthy of adoption in some of our insular charitable institutions.

THE GUNNERA SCABRA.

Among the many foreign plants thoroughly acclimatised in this island, the *Gunnera scabra* seems to be deserving of special attention; not as a mere ornamental curiosity in our pleasure grounds, but as affording promise of ingredients capable of being utilized in certain arts and manufactures.

In Chili, its native country, a fine black dye is said to be obtained from it, and also an extract containing tannin, which is used extensively in dressing hides, to which it imparts a flexibility greater than can be secured by ordinary means. In Belgium, where it was first of all introduced, the following opinion is entertained as to its probable value:—"Riche en tannin le *Gunnea scabra* pouvait être cultivé dans le midi comme plante industrielle, comme succedant au chêne, dont on utilize l'ecorce dans les tanneries."

The leaves of the plant, in its natural habitat, were found by M. Darwin to measure eight feet in diameter and twenty-four feet in circumference. Those grown in Guernsey, and exhibited at the last anniversary dinner of the Parent Society, measured seven feet four inches in diameter, and twenty-two feet in circumference. The difference in size is therefore very trifling between the indigenous and the acclimatised plant.

If, then, the latter is found, on examination, to yield materials of commercial value, the luxuriance of its growth warrants the assumption that these products exist in it abundantly. The plant increases rapidly, requires no particular care in its cultivation, grows in damp and comparatively waste places, under the shade of trees, and is readily propagated from offshoots and from seed.

All these circumstances considered, it would be worth while to ascertain, by chemical analysis, whether the leaf-stalks, the spikes, and the roots of the *Gunnera scabra* contain tannin in available quantity. If so, it might in this place be cultivated so as to be turned to profitable account. In England it does not appear to have succeeded to any great extent, although plants have been distributed in various localities.

Repeated trials of the Jamaica pea and Lima bean prove that although their vegetation in this climate is luxuriant, their fructification can never be productive. It will be interesting to watch the progress of the Elephant-grass and the Nardoo, raised from seeds by the Rev. W. T. Collings, who expresses his desire to be entrusted with the care of any birds or animals the Council may think fit to send over to so desirable a locality as the Island of Sark. It is to be hoped also that a portion of the valuable seeds presented to the Council by M. Pierre Pichot may be confided to the care of the members of the Guernsey Branch.

The Committee beg leave, finally, to suggest that, in order to forward the general objects of the Society, it would be desirable to employ a portion of our annual subscriptions in providing reliable instructions and the best practical models for persons undertaking legitimate experiments. For instance, it might be of great advantage if Oysterculturists were furnished with sample tiles, according to Dr. Kemmerer's latest improvements, so that they might be taught the most proper system for laying down the cultch. And so, as regards the rearing of the new silkworm, it might be a good plan to plant Ailanthus shrubs in some of the grounds of our charitable institutions, in accordance with the suggestions thrown out in a previous paragraph of the present Report.

These proposals appear to be in strict accordance with the expressed views of the Council of the parent Society, who anticipate zealous co operation rather than large pecuniary contributions from the Guernsey branch.

The foregoing Report was adopted by the Meeting, and ordered to be laid before the Council of the parent Society.

S. ELLIOTT HOSKINS, F.R.S., Hon. Sec.

APPENDIX.—B.

The following is a copy of a document, forwarded through the Foreign and Colonial Offices, to Her Majesty's Ministers, Governors, and Consuls abroad:—

ACCLIMATISATION.

INQUIRIES *addressed to Her Majesty's Minister, Governor, or Consul at* _____

The gentlemen to whom these questions are addressed, are earnestly requested to consider the high importance which will be attached to the answers which they may return, and the service which they will render to the cause of *Acclimatisation* by endeavouring, to the utmost of their knowledge, to make those answers as full and otherwise as satisfactory as possible.

The main purposes of *Acclimatisation* are to introduce, acclimatise, and propagate in the *United Kingdom* and its *Dependencies* such *Animals, Birds, Fishes, Insects,* and *Vegetables* as are likely to be of *use* or *ornament,* whether for *domestication* or *for varying the common food of the people,* or for *manufacturing,* or for *any other useful purpose;* and whose constitution and habits offer a reasonable prospect of successful cultivation. It is obvious that in *India, Australia, Canada,* the *Cape,* and other important *Dependencies,* unlimited scope is afforded for almost any variety of experiment.

It is confidently expected that the answers returned to these questions by *Her Majesty's Ministers, Governors,* and *Consuls* in different parts of the *world,* will bring together a *mass of information* on this interesting and highly important branch of knowledge such as never has been collected before, and the benefit which these gentlemen will thus confer upon their fellow-countrymen will be in proportion to the fullness and exactness with which those answers are drawn up.

In replying to questions 1, 2, 3, and 8, it is particularly requested that those special qualities which recommend the *Quadrupeds, Birds, Fishes, and Vegetables* as fit for food or domestic utility may be described. As regards *Quadrupeds,*

Birds, and *Fishes*, it will be very desirable to collect all the *information* which can be got as to the best modes of *feeding*, *keeping*, and *rearing* the same; and, as regards *Vegetables*, any information as to the best mode of *Cultivation*.

A copy of the last *Annual Report* of the *Acclimatisation Society* of *Great Britain* accompanies this, and will serve to explain more completely the action and purposes of the Society.

QUESTIONS.

1. Is there any *Quadruped*, indigenous or introduced to the *Country* in which you reside, which (having regard to the above definition of the objects in view) merits attention with a view to *acclimatisation* in *Great Britain* or any of its Dependencies? If there be any such, state whether it is attainable at a reasonable rate, and whether it is likely to bear the risk of transport?
2. Is there any such *Bird?*
3. Is there any such *Fish?*
4. Is there any such *Insect?*
5. Is there any such *Timber Tree?*
6. Is there any such *Medicinal Plant?*
7. Is there any *Fibrous Plant* likely to be useful for manufacturing purposes?
8. Is there any *Vegetable suitable for the food of man*, or for forage, or for any other useful purpose?
9. Do you know any (*a*) *Quadruped*, (*b*) *Bird*, (*c*) *Fish*, (*d*) *Insect*, (*e*) *Tree or Plant* existing elsewhere, the introduction of which to THE COUNTRY IN WHICH YOU RESIDE would be likely to be beneficial; one of the objects of the *Acclimatisation Society* being to reciprocate the benefits which it receives from other countries?
10. Does any *Organisation* exist, or could it be easily called into existence, capable of undertaking the task of introduction?

Any *Remarks* founded upon special knowledge or local information, capable of being made useful to the progress of *Acclimatisation* will be desirable.

ANSWERS TO THE FOREGOING INQUIRIES.

*** *In nearly every instance answers have been received to* ALL *the questions forwarded, but, for obvious reasons, only those answers which are in the affirmative, and which convey information likely to be useful, are given in the following List. The* figures *correspond with the numbers of the Questions to which they refer. The Council of the Acclimatisation Society do not hold themselves responsible for the rendering of local names.*

ALEPPO (SYRIA).

1. Large-tailed Syrian sheep, and a very tall breed of cows.
2. Fine pigeons, red-legged partridges, francolins, and bustards.
6. Wild quince.
8. The egg plant, vegetable marrow (*Cucurbita ovifera*), melon, water-melon, &c., sainfoin.
9. *(b)* Poultry, *(c)* South Sea Island cotton seed.

ALGIERS.

5. *Thuja articulata* (arbor vitæ).
7. The diss and the alfa.
8. The sweet acorn.
10. A Garden of Acclimatisation established, and is now flourishing.

ALICANTE (Spain).

1. Large jackass.
2. Large black cocks and hens.
4. Common silk-worm.
7. Common varieties of hemp and flax, aloe, esparto or feathergrass (*Stipa* of Linnæus).
8. Mani, or cacahuete (American earth-nut, or pindars) (*Arachys hipogæa*, Lin.)
9. (*a*) Horses, bulls, cows, sheep, and pigs from England.

AMSTERDAM.—Nil, other than frogs and toads, of which large numbers are exported for the use of gardeners, to consume slugs and snails.

ANCONA (Italy).—Nil.

ANTIGUA (West Indies).

2. Geese, turkeys, guinea birds, ducks, owls, hawks, and kites; Migratory Birds—Quails, ground doves, plovers, and sandpipers; humming-birds, and other species of Pici.
3. Turtle, king-fish, baracouta, grouper, snapper, lobsters, shrimps, marine crab, and the *Cancer ruricola*, or land-crab, oysters (*Ostrea parasitica*).
5. Red and white cedars (*Cupressus thyoides*), mahogany, logwood, manchimal mangrove, olive bark tree (*Bucida buceras*), broad-leaved terminalia, or wild almond tree, and the tamarind.
6. Castor oil plant (*Palma Christi*), *Quassia excelsa*, lemon grass (*Andropogon schœnanthus*) and the Citron tribe.
7. The snake grass (*Sanseviera spicata*), American aloe (*Agave Americana*), and several plants belonging to the Sedge tribe (*Cyperaceæ*).
8. Sweet potato (*Convolvulus batatas*), yam (*Dioscorea alata* and *sativa*), eddoe (*Caladium esculentum*) okro (*Hibiscus esculentus*), different species of squash (*Cucurbita melopepo*, &c.), mountain cabbage (*Areca oleracea*), plantains and bananas (*Musas*), tou-le-mois, arrow root, India and Guinea corn; for Forage—Guinea grass, and a grass called cent.-per-cent. (*Punicum colonum*).
9. (*a*) Good sheep and oxen.

APIA UPOLU (Navigator Islands).

1. Vespectilis, Mus Gliris.
2. Manu-mia (*Didunculus strigirostra*), a species of Ptilinopus; a species of Carpophaga; *Tachypetes aquila*, a species of Sula.
3. Inagna Pulolo.
4. Tavau (in the class Vermes).
5. Mumala, wild nutmeg.
6. Many.
7. A great variety, including Fau togora, Fau pata, Lau tutugna, Fua fua, Mati-aule-ulu, and many others.
8. Bread-fruit (*Artocarpus*), yam (*Dioscorea*), taro arum, ti cordylini, ginger, arrow root, vi eira dulcis, Cayenne pepper, fan palm-tree, ferns (the roots of some are edible), the mountain plantain.
9. Plants and animals.

ARCHANGEL.

3. Sterlet (*Accipenser ruthenis*).

AUSTRALIA (Victoria).—See Appendix C.

AUSTRALIA, SOUTH.

1. Kangaroo, wombat, wallaby, opossum, and uroo.
2. Magpie, lipore, or native pheasant, bronze-winged pigeon, the native turkey, or more properly bustard, curlew, a large variety of fine ducks, especially the mountain or red-breasted duck, New Holland goose, Muscovy goose, quail, teal, crested pigeon,

speckled dove, emu, black swan, nankin, laughing jolkas, diamond sparrow, parrots, parroquets, and cockatoos.

3. Murray cod, mullawa, bream mullet, a fresh water lobster, gundallah, or butter-fish, a small fish of the salmon family, a small kind of trout, a large kind of perch, the calubko, and pulyee.
4. One kind of spider, which spins a yellow kind of silk.
5. The white gum (*Eucalyptus roshata*), red gum, myall, eucalypti, blackwood, varieties of the mattee, hakias, grevillias, kalosstemnon, and vimenera.
6. Grass tree (*Xanthorrhœa arborea and Australis*), red gum tree, the sarsaparilla of the colonists (*Polygonum*), drosira (*Egalieum rosulata*), drosira (*Egalieum sulphurea*), and gum wattle (*Acacia pycnantha*).
7. A sort of grass, fit for making ropes, &c., the common Cape aloe, a species of flag, and the native flax.
8. A sort of grass, *Ceratoshlon Australis*, nardoo, saltbush, alsafa, wattle, peach, currant, several grasses, poa, stirpus, and stipa, a small description of cucumber, and the native pear.
9. (*a*) The Angora goat, two species of the South African antelope, the eland, and the oryx (*Oryx Capensis*, Harris), the Cashmere goat, several kinds of antelopes, the llama, the alpaca, the foreign long-woolled sheep, the hare, and the red and fallow deer. (*b*) the European pheasant, partridge, and woodcock; the secretary bird from the Cape of Good Hope, the crowned pigeon from New Guinea, the ostrich, the skylark, thrush, sparrow, and many of the hardier insect-eating birds. (*c*) The salmon, the English oyster, salmon trout, plaice, and sole. (*d*) Several of the Asiatic silkworms, especially those of China; the eggs of the *Bombyx* into Java; the Argan tree (*Arganica Sideroxylan*), the *Oxalis mori*, and the *Bombyx Cynthia*. (*e*) The Chinchona, lately introduced *crenata*, the Para grass (*Panicum tumentorum*), the Alsafa grass from New Mexico, the arrowroot from Bermuda, the tous-les-mois from Trinidad, and the granadilla (fruit) from Natal. The clear bright sunny climate of South Australia should promise well for the cultivation of plants producing colour, as madder, saffron, &c. &c.
10. The Botanic Garden of the Province and the Adelaide Philosophical Society.

BAGHDAD (Turkish Arabia).

9. Many, probably, and especially *(e)* Vegetables.

BAHIA.

1. Mule, tapir, or anta, paca, capivara, raton verdancico, coati, peccary, contia, and different species of deer.
2. Brazilian ostrich (*Emu*), seriema, toucans, jacu, and a variety of wild ducks, pigeons, partridges, and parrots; the blue and red arara, black swan, catinga, soppet, tapatinga, are numerous.
3. Dourado (*Dolphin*), and surubim.
4. Bombici (*Bombyx aurata*), a species of bee that has no sting.
6. A species of belladonna, mastruce, medical aloe, and a few more known and in use in the Pharmacopœia.
7. Palm aloe, embiza, sipa, carua, &c., ticum palm, cotton tree, another of the palm species, *Attalia fumifera*, Caruanba palm (*Corypha cerifera*).
8. Capiva gordura, a species of bamboo, an endless variety of sweet potatoes, yams, aipim, mungara, inhamba, mundroea, arrowroot, Bahia inhams, or yam.

BARBADOS.

1. There is no quadruped which could be recommended for the purpose required. Those animals which are used for domestic purposes

are imported. The breeding of horses is not encouraged. Mules are not reared. It is rarely that one meets with a colt. The breeding of asses would be attended with great benefit, the land being most suitable, but they are so hard worked, that there is little opportunity for their increasing. Little attention, too, is paid to the breeding of cattle, most of which are kept for the purpose of the milk, and the calves are sold to the butchers. Besides the above cause, the present race is of a diminutive size, which depreciates its value; by far the most part of those used for working purposes, and those that are slaughtered, are in consequence imported. Sheep and goats are reared, but are not improved upon, as the skin of the first is as smooth as that of the second. The hog breeds very quickly, but the offspring is sold before they attain to full growth. There are some exceptions, as some persons take delight in the breeding of all sorts of cattle, &c., and produce very fair specimens. The only indigenous quadruped which we still meet with (although very seldom) is the racoon (*Procyon lator*), which, on account of its uselessness, need not be noticed any further. The supposed existence of the monkey on this island must be viewed as merely historical.

2. This question can, like the foregoing, be replied to in the negative. This is to be expected when we consider that the whole island is under cultivation, thus leaving no forest for establishing many kinds of the feathered tribe. The only bird which could be taken into consideration is the black bird, on account of its beautiful black feathers and voice, as well as its usefulness in destroying the insects and vermin which are so destructive to cultivation. Its natural habits being hardy, it can endure the chance of transportation, and although it feeds, as stated, on insects, &c., it can also be fed on roots and seeds. The black bird, which we speak of, is the *Quisculus crosocrostris*, and not the *Merula vulgaris*. Some have been transported to Melbourne, but the species is not known. The above remarks relate merely to indigenous birds. With regard to domestic birds, there is a plentiful supply of poultry.
3. Although the sea which surrounds this island abounds in a great variety of fishes, they are still not transportable. We must turn our attention to the fresh-water fish. Of these there are three sorts which deserve remark, with a view to acclimatisation, viz.:— Snook (*Centropomus undecimalis*), mullet (*Mugil albula*), and caffum (*Megalops atlanticus*). The snook, although belonging to the same genus as the pike (*Esox lucens*), differs in species. The species of the mullet differs from that of the *Mugil capito* (grey mullet). Both the pike and grey mullet are well known in Europe. The snook, mullet, and caffum frequent the salt as well as fresh water, and are to be found in abundance in the rivers. They can be propagated with success in ponds. The snook improves in size very rapidly, and are met weighing from 25 to 30 pounds. The caffum attains to a length of three feet, and weight of 15 lbs. The mullet is a smaller kind of fish. These, when fresh, are wholesome food, and increase rapidly. They are easily obtained, and at little cost. The safest mode of transporting them is in a wooden trough, filled with fresh water, and with a thick layer of clay or sand at the bottom. The water should be changed as often as practicable. Their food should consist of the refuse of fresh flesh and poultry, free from blood, small fish, yolks of hard-boiled eggs, bread or biscuit-crumbs, and fresh or cooked vegetables. On reaching their destination, they should be put into ponds fit for their reception, where food is easily attainable. They breed of themselves, but, to promote their increase, the pisciculture system which is now in use should be re-

sorted to. Should there be any obstacles in the way of the above mode of transport, fecundated ova of these fishes might be hatched artificially.

4. There are no insects in this island that need any particular notice. Although *Crustacea* do not belong to the class of insects, it may be mentioned that the rock-lobster and sea crawfish, very large and good-flavoured, exist here. They can be recommended for the purposes of acclimatisation, if not in the United Kingdom, in its dependencies, in most of which they are to be found. It seems that the introduction into Melbourne of the European lobster has failed, but the trial of some from other directions might be attended with success.
5. No woods exist here, consequently very few timber trees are to be found; the indigenous locust (*Hymenæa combaril*), and bally tree (*Baincha nigra*), are rarely to be met with. The mahogany *Swietenia mahogoni*), however, which was introduced here, is planted very generally, but these trees are so well known that their transportation is unnecessary.
6. None in addition to those which have been already analysed and recorded, although be it said in praise of the inhabitants, that every one takes delight in cultivating flowers and other plants for their comfort.
7. There are many kinds, the chief of which are the maypole (*Agave Americana*), Spanish needle (*Yucca deaconis*), ochna (*Hibiscus esculenta*). These plants have been treated on by writers, and have no doubt been introduced into many places. There is no need, therefore, to give any idea of their cultivation, beyond stating that the two first are produced from suckers and are hardy, whilst the last grows from the seed.
8. The most useful plants are already introduced into other countries, but as no labour has been spared in introducing into Europe the Chinese yam (*Discorea batatas*), the hook-podded pea (*Dolichos unguiculatus*), and the Lima bean (*Pharealis limensis*), why not give a trial to the causse yam (*Discorea alata*), the tanyer and eddoe (*Arum esculenta*), the increase peas (*Dolichos sesquipedalis*), and the buana vesta (*Lablab vulgaris*), all of this place, and which require the same treatment as the first-named plants. There is also here a tribe of pea, which is easily cultivated, of good flavour and wholesome, *i.e.* the pigeon pea (*Cajanus indicus*) and which is worth making a trial of.
9. (*a*) There is no scope in this place for such introduction. This must be left to the energy of those who feel an interest in rearing stock, and who no doubt have the means of carrying it into execution. (*d*) Of the few that would be of general use the introduction of the cochineal insects might be beneficial as not having yet been tried. (*e*) The Cactus is known throughout the island, and in great variety, particularly the *Cactus opuntia*, a plant which grows here in great abundance.
10. The General Agricultural Society, which endeavours to promote industry in the island, could be applied to, as being capable of undertaking the task for forming a committee of its members to carry it into execution.

BERDIANSK (Russia).

5. There are no trees except those lately planted.
9. None, as the climate would prove too severe to admit of the introduction of any of the above-mentioned quadrupeds, &c., and Russia is well supplied with every one of the animals suited to this climate.

BERMUDA.

5. Agave, Yucca, and *Juniperus virginiana*, or common red cedar.
6. The aloe (medicinal); almost any other might be grown here.
7. Fibrous plants, as well as most vegetables, grow here in perfection in certain respects, the fibre being as a general rule much more delicate than that found in most places.
8. Arrowroot and Irish potatoes.
9 (*e*) *Quercus vivans*, or live oak of America; the various species of the Agave plant, the *Agave sisilina*, the date and cocoa tree; (*e*) the oyster.

REMARKS.—The climate may be made the medium by which animals and vegetables may be introduced from a higher to a lower degree of temperature and *vice versa*.

BILBAO.

9. (*a*) The alpaca might be introduced with advantage in the north of Spain.

BORDEAUX.

10. The project of a local organisation has been abandoned, and the Acclimatisation Society of Paris have renounced the idea of founding a branch here, in consequence of the absence of all interest in the natural productions of the district, and the unfavourable conditions of the climate, which is exposed to too sudden alternations of heat and cold.

BOSNA SERAI.

6. There is a kind of Pyrethrum, which grows in the Herzegovina and Dalmatia, of which large quantities are dried and exported to Europe. The flowers, leaves, and stalks are dried and ground to powder, and in this shape the plant is used to destroy bugs, fleas, and other similar vermin, and is most efficacious.
9. Most of those found in England are produced here.

CAGLIARI (IN THE ISLAND OF SARDINIA).

1. Moufflon.
5. Oak (*Ilex* and *Rubia*) and the yew. The *suber*, or cork tree (*Quercus phellos*) abounds, but is seldom used as timber.
7. Common flax plant (*Linum*).

CALLAO (PERU).

1. Anchenia, llama, alpaca, and vicuna.
6. Matico, mishica mishica, centella, and guaco aguodo.
7. Pucapanya, the leaves of which are a scarlet dye; a Cactus, which bears a kind of wool, which might be substituted for cotton; Cactus abounds.
8. Yellow potato, the chauca or blue potatoe, the oca, mashua, ulluca, anachaca, and quinoa (*Chenopodium quinoa*).

CANTON (CHINA).

2. A species of thrush called stiva-praih, and a lark.
5. Camphor tree.
7. A species of flax, which is bleached and made up into a manufacture called "grass cloth," The cotton of China is well known, but that is not a fibrous plant.
8. The sweet potatoe.

CARTHAGENA (SPAIN).

3. Very inferior; not worthy of notice.
7. Only the well known Esparte.
8. None that are not already known in England.

CHERBOURG.—Nil.

CHINA.

1. There is a very prolific race of sheep in the north, and there is also the yak, both of which have engaged the attention of foreigners. Some yaks were taken to France a few years ago by M. Montigny.
2. Possibly some of the fine Chinese pheasants, if not too delicate in constitution, might be worth trying. There is also the sand grouse in extraordinary abundance near Peking. This bird occasionally visits the British islands, and might no doubt be introduced; the flesh is much esteemed. The singing birds are of too tropical a type to be likely to succeed.
4. There is the larva of a bombyx (*B. cynthia*), feeding on the Ailanthus, which is attracting attention in Europe, and possibly others may be found the cocoons of which furnish a strong though coarse silk.
5. No doubt numbers in the north, whence Fortune, Veitch, and others have already introduced a great many. The more northern bamboos would doubtless succeed in, for instance, the south-west of Ireland, without any protection, as they abound at Ningpo.
6. Doubtful. China medicine is quite *sui generis*, and their *materia medica* very peculiar. They depend greatly upon herbs, and make use of almost all the common indigenous plants, to which we should certainly refuse the virtues they ascribe to them.
7. Jute (*Corchorus capsularis*) and grass cloth (*Boehmeria nivea*) are commonly grown here in the south. The latter abounds on the walls of Canton.
9. Doubtful. The introduction of our best varieties of fruits and vegetables would certainly be a great boon, and in time supplant those now in use.

CHRISTIANA.

2. The hazelhen (*Gellinous*), which is the most esteemed and delicate bird in Scandinavia, on account of its delicate game flavour, and peculiar plumpness of flesh, compared to its size and to other birds; the flesh is white, like that of the pheasant. During the summer it seeks the birch woods and heather; as soon as the birch leaves are fallen it takes to the more densely-wooded fir forests, principally, as a shelter against its great enemy the hawk. In the summer its food consists of heather, which appears to be the favourite food, conjointly with berries, such as the blueberry, whortleberry, cranberry, &c.; likewise, when on the ground with their brood, they devour insects and larvæ. In winter, when the favourite food, that of heather, is not to be had, the red berry of the mountain ash, birch buds, juniper berries, and fir cones, constitutes the chief food. I do not apprehend that there would be great difficulty in acclimatising this bird, or in transporting them, as they are readily tamed and familiarised with a cage and with those who feed them. Heather and juniper berries should be their first food; they soon, however, become reconciled to hemp seed, corn, buck-wheat, and other seeds, which after a time they devour with avidity. For the first few days after the bird is caged, the berries should be put in a flat dish with water, with a view to teach the bird to drink. Like domestic fowls in a tame state it soon learns to eat boiled and raw meat likewise. Plenty of sand should be in the cage, otherwise he will soon pine away, as he delights in daily rolling in and throwing the sand over his back and head.

8. Multeberry, or cloudberry (*Rubus chazincemorus*) grows wild all over the country in marshy or peaty soil, but more especially in Finmark and north of Norway; it is found in great abundance, and forms an article of export to the south, where it enters largely into the domestic economy of the inhabitants, not only as an admirable substitute for vegetables at a time when they are scarce, but especially on account of the inherent antiscorbutic qualities the berry contains. I have no doubt but that this plant can be readily acclimatised in our marshy valleys, in the mountain districts in Wales, Scotland, as well as north of England, probably likewise in Ireland, where peat is so abundant. They are propagated direct by transplanting, or by seed, perhaps more readily by the latter. When once acclimatised they rapidly propagate themselves.

COQUIMBO.

1. A species of deer, and the Guanaco.
6. Many kinds of plants are used by the natives for medicinal purposes, but most of them are inert.
9. (*a*) The Cheviot and Leicester breeds of sheep have been imported from England, and an excellent cross-breed has been the result with the sheep of this country.
10. Private individuals have hitherto imported on their own account; no organisation could be easily called into existence for that purpose.

CORSICA.

1. The moufflon, or muffalo.
5. Larch (*Pinus larix*).
6. Corsican moss.
9. (*a*) Black-faced or Scotch heath sheep.
10. Agricultural societies have been established since 1853 in the five principal towns of the island.

DAMASCUS.

1. The gazelle—there are two species in Syria; the fat-tailed sheep; the Syrian donkey, of which there are two species, viz., the large black or dark brown, which is useful as a sumpter animal, and the white, which is a graceful creature for ladies or children to ride; the mule, which is a cross between the large donkey and the Arab horse; the Arab horse, which is well known.
2. The francolin, a species of pheasant; a rich variety of hawks; the golden oriole (beautiful plumage); the blue bee-catcher (ditto).
4. A great variety of beetles of every shade of colour, as well as butterflies and moths.
5. The Persian poplar, varieties of evergreen oak, the pistacio tree, and the olive tree.
6. Scammony, colocynth, *Palma Christi* (or castor oil plant), henbane, mandrake, squill, storax, "Shirsh el Halamy," which is used for washing delicate articles which will not bear the the action of soap.
7. Reeds, which are manufactured into mats and baskets.
8. A variety of pumpkins, vegetable marrows, and a species of cucumber, a plant called "bamie;" several kinds of egg plant, sessame seed, olives, dates, apricots, and plums; small peas, resembling lentils.
9. (*a*) The English cart-horse, and wild rabbit; (*b*) pheasants; (*c*) salmon, trout, and oysters; (*e*) ash and mountain-ash, birch, beech, elm, and other trees; gooseberries, currants, the better kind of apples and pears, and yams.

DARDANELLES.

1. Camel and buffalo.

4. Silkworms are raised with success; the gall-wasp (*Cynips folii quercus*) also exists, but is exceedingly difficult to find; any attempt at its acclimatisation must be accompanied by the introduction of the *Quercus infectoria*.
5. Valonia oak (*Quercus ægilops*).
9. (*e*) The principal want of this part of Turkey at present is that of good varieties of cotton seed, particularly New Orleans. This has to a certain extent been introduced, but further supplies are required.

DUNKIRK.

4. The edible snail (*Helix pomatia*) is made use of as an article of food.
7. A species of brushwood grows upon the sandy downs close to the sea, known as arbonsia, which bears a white blossom resembling cotton; the fibre is very short, but the idea has been entertained that it might be used in the manufacture of paper; in the autumn it bears a small yellow berry.
8. Chicory is much used as a vegetable; there is also a marine plant, called "crête marine" (samphire) used as a salad and also pickled.
10. There is an Agricultural and Horticultural Society, but their attention is chiefly directed to the improvement of cattle and horses.

FIJI ISLANDS.

2. There is no useful bird indigenous to Fiji; the ornamental birds are few, and would be difficult to transport alive.
5. There are several valuable timber trees in Fiji, which have been described at length by Dr. Sieman; perhaps some of these might be introduced into the new colonies of Northern Australia.
6. Fiji is rich in medicinal plants used as such by the natives, but custom and prejudice prevent the natives from imparting to Europeans any knowledge of the plants possessing these virtues. The search for them would probably repay the investigations of a scientific man.
7. The fibrous plants of Fiji have also been described by Dr. Sieman. It would not appear, however, that any one of them would be of sufficient value to repay its introduction elsewhere.
8. The ordinary tropical vegetables, yams, taro, bananas, and plantains, described by Dr. Sieman; and one, the kairvai (*Dioscorea esculenta*, Lin.), is recommended for adoption in other tropical colonies by Dr. Sieman; and breadfruit, which might also perhaps be introduced with advantage into Northern Australia.
9. (*a*) Angora goat; (*d*) silkworms, which feed on the *Palma Christi*; the cocoa or (*e*) cacao tree.

The islands would suit most admirably the growth of long-haired goats. Cotton, sugar, and spices, with coffee and cocoa, will surely be produced here eventually, as in the Mauritius. The breadfruit tree might be exported from here to the northern colonies, now founding in Australia, easily.

FRANKFORT-ON-THE-MAINE.

3. Sander (*Lucioperca Sandra*), a fish of the perch family; the wels of Southern Germany (*Silurus glanis*).
9. English breeds of many domesticated animals seem to be superior to German.
10. Societies in Berlin and Frankfort-on-the-Maine.

GALVESTON.

2. The trumpeter swan *(Cygnus buccinator)*, varieties of geese, brant, and ducks; of the latter may be mentioned the sprig tail (*Anas acutus*), green-winged teal (*Anas Carolinensis*), blue-winged teal (*A. discors*), red-head (*A. ferina*), canvass back (*A. vallisneria*), and

wood duck (*Aix sponsa*), the rosy spoon bill (*Platalea Ajuja*), long-billed curlew (*Numenius longerostris*), short-billed curlew (*N. brevirostris*), red-breasted snipe (*Scolopax grisea*), yellow legs (*S. flavipes*), tell-tale (*S. melanolencus*), the prairie hen or pinnated grouse (*Tetrao cupido*), a species of quail (*Ortyx texanus*), varieties of the heron, woodpecker, and finch, from which birds of great beauty might be obtained.

3. Red-fish or spotted bass, the *Corvina ocellata* of De Kay; sheep's-head, *Spurus ovis* (Mitchell), peg-fish, probably of the family *Suanidæ Grande ecaille*; Jew fish, croker, trout, and mullet, all of which are esteemed as food, and could doubtless be acclimated in similar latitudes.
4. Horned lizard, commonly termed horned frog, whose food consists almost exclusively of the different species of ant, and would be therefore a valuable acquisition wherever these destructive insects abound. With care and attention this reptile might be transported to any distance.
5. White oak (*Quercus alba*), live oak (*Q. virens*), iron or post oak (*Q. obtusilora*), the bark of the red oak (*Q. rubra*), is used for tanning; lime tree, or bass wood (*Tilia Americana*), red cedar, deciduous cypress (*Cupressus disticha*), maple, and walnut; Ornamental Trees —Varieties of the magnolia and of the locust tree (*Robinia catalpa*), tropon (*Ilex vomitoria*), dog-wood (*Cornus florida*), wild rach (*Cerasus Caroliniana*); wax myrtle (*Myria cerifera*), is valued for the wax obtained from the seed pod, and the pecan (*Carya olivæformis*) for the excellence of its fruit.
6. The number of medicinal plants in the Southern States published for present use in the hospitals amount to sixty-four, of which the following may be noted as in common use:—Indian turnip (*Arum tryphyllum*), Virginia snake-root (*Aristolochia serpentaria*), pleurisy root (*Asclepias tuberosa*), wild senna (*Cassia marelandica*, worm seed (*Chenopodium anthelmenticum*), dog-wood (*Cornus florida*), Jamestown weed (*Datura stramonium*), boneset (*Eupatorium perfolialum*), winter green (*Gaultheria procumbens*), Indian physic (*Gillenia trifoliata, Lobelia inflata*), poke-root (*Phytolacea decandra*), Georgia bark (*Pinckneya pubens*), white oak (*Quercus alba*), bitter-sweet (*Solanum dulcamara*), pink-root (*Spigelia Marilandica*), fever-root (*Tricosteum perfoliatum*), American helebore (*Veratrum viridum*).
7. The fibrous plants of this country which are used for manufacturing purposes are indigenous to, or cultivated in, Great Britain or its dependencies.
8. The ground nut (*Apios tuberosa*), if not already introduced to Great Britain, merits the attention of the Acclimatisation Society; it is productive, nutritious, and easily cultivated. The vines of this country are also worthy of notice; good wines have been obtained from the Cataroba, Muscalline, Mustang, Post oak, and El Paso grapes. Of the grasses in this state the mesquit is one which particularly merits the attention of the Acclimatisation Society; it is nutritious, affords good pasturage and forage, and is eaten with avidity by all graminivorous animals. A grass, termed rescue grass, is also much esteemed for winter pasturage; other grasses, termed wild oats, wheat grass, winter grass, grammer grass, crow-foot, and wild rye, are indigenous to the State, and have been commended for pasturage.
9. (*a*) The different breeds of English horned cattle, horses, sheep, and swine, would be beneficial and improve the native stock.

GOTHENBURG.

2. Swedish hjerpa (*Tetrao bonasin*, Lin.) thrives best in mountainous

districts overgrown with birch and pine wood. Some varieties of the woodpecker (*Picus leuconotus*, Bechst), (*Picus tridactylus*, Lin.), (*Picus canus*, Gmel), might be both useful and profitable in the mountain forests of Scotland.

3. Pike perch (*Lucioperca sandra* of Cuvier), a fish of excellent flavour, thrives best in lakes with deep clear water (Swedish Gös).
5. A variety of maple (*Acer platanoides*, Lin.), prefers loose soil with dry substratum; a variety of alder (*Alnus incana*, Wild), same soil, would seem to suit for the north of Scotland. The Fir (*Pinus abies*, Lin.), rather rich soil with mixture of clay, and a low situation, ought to be protected from high winds.
6. *Angelica littoralis*, Fr., sandy soil along the sea coast.
8. Varieties of Trefoil—*Trifolium hybridum*, Lin., requires a rich soil; *Trifolium mountanum*, Lin., high situation, principally on secondary or tertiary formations; *Trifolium agrarium*, Lin., dry situation; *Trifolium spadicum*, Lin., high and dry situation. Vetches—*Vicia pieiformis*, Lin.; *Vicia dumetorum*, Lin.; *Lathyrus heterophyllus*, Lin.: excellent plants for fodder; require a strong soil and a substratum of lime or shells. Milk Vetches—*Astragalus oroboides*, Horn, and *Phaca frigida*, Lin., may be planted in mountainous districts in Scotland. *Calamagrostis silvatica*, De C.; *Calamagrostis acutiflora*, De C.; *Calamagrostis Halleriana*, De C.; require a dry stony soil; and *Calamagrostis Hartmanniana*, Fr., a low, moist situation; *Melica ciliata*, Lin., dry soil, limestone formation; *Agrostis rubea*, Wg.; *Poa cenisia*, All. Oats, *Triticum violaceum*, Horn, high mountainous districts; *Bromus tectorum*, Lin.,; *Festuca duriuscula*, Fr.: dry, meagre soil. *Poa suditica*, Henk.; *Poa serotina*, Ehr.; *Aira uliginosa*, Wg.; and *Bromus inermis*: require a low, moist situation. *Glyceria remota*, Fr.; *Vahlodea atropurpurea* Fr.: moist situations in mountainous districts. *Triticum hebestachyum*, Fr.; *Fluminia arundinacea*, Fr.; *Aira bottnica*, Wg., sea-coast; *Psamma baltica*, R. S., light, shifting, sandy soil; *Carex Norwegica*, Wild; *Carex salina*, Wg.; *Carex maritima*, Mull.: moist situation on the sea-coast. *Carex turfosa*, Fr.; *Carex cæspitosa*, Lin.: swamps. *Carex ericetorum*, Poll., dry, exposed situations.

HALIFAX (Nova Scotia).

1. Musk rat (*Fiberzibethicus*), red fox (*Vulpes fulvus*), ground squirrel (*Tamia striata*).
2. The common wild or dusky duck (*Anas obscura*) would prove useful as food, the flesh being of particularly good flavour, approaching that of the canvass-back duck (*Aythya vallisneria*), so well known to epicures. The spruce partridge (*Tetrao Canadiensis*) has been introduced previous to this date, but did not succeed, the specimens dying from some unknown cause soon after their arrival.
4. The firefly (*Lampyris corusca*), as an ornamental insect, might be of some value. On dark nights it would fly about the woods and gardens, emitting its spark-like light at intervals, and presenting a new feature in the natural history of England.
5. White maple (*Acer eriocarpon*) and sugar maple (*Acer saccharium*) would be of service as ornamental trees, for their ever changing tints of foliage in autumn make even the sombre forests of the west to present a scene of unrivalled splendour.
6. The Indian cup or pitcher plant (*Sarracenia purpurea*), supposed to be a remedy for small pox; the gold thread (*Coptis trifolia*) used as a tonic.
9. The whole province is more or less covered with an unbroken forest, composed principally of pine (*Pinus strobus*), spruce (*Abies alba*,

Abies nigra, and *Abies rubra*), birch (*Betula papiracea* and *B. nigra*), beech (*Fagus ferruginea*), white maple (*Acer eriocarpon*, and sugar maple (*Acer saccharium*), and dotted over with innumerable lakes of small and large size, the whole intersected with rivers and brooks. Portions of the country, especially the low-level lands, situate near the great basin of Minas, celebrated for their feeding properties, present a large extent of rich pasturage for ruminant quadrupeds. All the rocky hills, forests, and open barrens are literally covered with small berry-bearing shrubs and plants, which are eagerly devoured by both quadrupeds and birds, and it may be safely stated, that any animals given to browse upon young trees or shrubs, and fond of an extensive range of dense forest, would in the capital of Nova Scotia rapidly increase. The unfrequented districts of the interior with their thickets of spruce, are particularly suitable for the capercallie of Germany (*Tetrao irrogallas*), which lives chiefly on the buds and shoots of that tree, while there are probably several other forms known to the Society which would prove a valuable addition to the local fauna of this interesting country.

10. There already exists an institution supported partly by public grant and private enterprise, owned and presided over by an enthusiastic naturalist, Mr. Andrew Downs, well known to the Zoological Society of London.

HAMBURG.

1. The climate of Northern Germany is so much the same as that of Great Britain, that the Quadrupeds are generally the same in both countries. In the British Colonies, however, of Australia and New Zealand, the German shrew mouse and hedgehog might be useful, especially the latter, for the destruction of snakes, and these would be attainable without much difficulty.
2. German Buzzards would thrive in Australia, but would be costly, and the transport hazardous.
3. The sander, or pike-perch (*Lucio perca*), is a fish commonly eaten in Hamburg and other parts of Germany, at the best tables, and, from its large size and excellent flavour and abundance in certain localities, is a fresh water fish of great value. Arrangements have already been made by Mr. W. A. Lloyd, Curator of the Aquarium of the Zoological Society at Hamburg, for sending specimens of this fish regularly to London, by means of an apparatus fixed on board one of the steamers plying between Hamburg and London, of which the Acclimatisation Society is already aware. The small sturgeon (*Accipenser sturio*), the pope or raffe (*Acerina vulgaris*), and the large loach (*Cibitis fossilis*), are also fish well known at Hamburg, and which might be made more valuable in England than they now are.
9. (*a*) The Manguste (*Herpestes*), from India and South Africa, would be useful in Germany for killing snakes, rats, and mice. The following wild dogs from India, Africa, America, and Australia, would improve the German breeds of dogs—viz., *Canis primœvus*, *C. ratilans*, *C. dingo*, *C. Simensis*, *C. anthus*, *C. aureus*, *C. carnivorus*, *C. jubatus*, *C. latrans*. Small sorts of Indian cats, some foreign hares, the wool-mouse, wild asses, mountain horses, and other hoofed quadrupeds from transatlantic countries would thrive and be valuable in Germany and Central Europe. Such as the *Asinus kiang*, *A. hemionus*, *A. onager*, *A. Africanus*, *Hippotigus zebra*, *H. Burchellii*, and *H. quagga*. More might be done also in the importation of ruminating quadrupeds—viz., the *Auchenia huanaco*, *A. alpaca*, *A. vigogna*, *Moschus moschiferus*, and

Tarandus rangifer. Of stags—viz., *Cervus Wallichii*, *Aristoteles*, *Duvancellii*, *Axis*, *Virginianus*, *leucurus*, *canadensis*, *simplicicornis*, *equinus*, *mollucensis*, *porcinus*, &c., and of antelopes—viz., *Antelope vicas*, *picta*, *oreotragus*, *pygarga*, *furcifer*, *lucophoea*, *goral*, *montana*. Wild goats and sheep, horned cattle, all sorts of the *Bos* and *Bubalus* will always thrive in Germany; and South African bush pigs and Indian pigs would also be a great requisition. The reindeer might easily be acclimatised in the German Alps and in the Scottish Highlands, but not in warmer climates. (*b*) Of birds of prey the only one not yet imported into Germany is the snake vulture from Africa. The North American buzzard would, of course, thrive here. Owls and other roving birds which do not migrate, pigeons, chickens, and waterfowl from transatlantic countries, particularly the last, all merit attention in Germany.

10. No such organisation exists in Germany, and it would take much time and trouble to call it into action.

REMARKS.—The above information is furnished as regards quadrupeds, birds, and insects by Dr. Brehm, the learned director of the Zoological Gardens here; and, as regards fish, by Mr. W. A. Lloyd, As regards trees and plants, inquiries have been made of Mr. Booth, the eminent nursery gardener at Flottbeck, near this City, and of other horticulturists.

HOBART TOWN (TASMANIA).

1. The only Tasmanian quadruped of much economic value is the brush kangaroo, very superior leather being made from the skins. It feeds well in confinement, but only produces one annually. Like most of our indigenous marsupial quadrupeds, this animal is fast disappearing before the creatures introduced from Europe, and it may therefore be safely concluded that any attempt to acclimatise it amongst animals of higher organisation will fail.
2. The Cape barren goose (*Cereopsis Novæ Hollandiæ*), found on several of the islands in Bass's Straits, has been frequently domesticated. It is a hardy bird, of good quality, and as large as the common goose. It should be kept apart from other poultry, as it is of a very quarrelsome disposition. The shoveller duck (*Spatula rhyncotis*) is of excellent quality, but has never been domesticated. The bronze-winged pigeon (*Peristera chaleoptera*), though never domesticated, has increased in number considerably with civilization. It is larger than the common blue rock pigeon, and of good quality. The young birds are easily obtained. A smaller species (*P. elegans*) is of better quality, but inhabits the dense scrubs, and is comparatively rare.
3. The only Tasmanian fresh-water fish (known as the cucumber mullet) that would be worth the transport, could not be kept alive in confinement. It is so sensitive as to be frequently killed by the prick of the artificial fly.
5. None that would be of much service in Europe.
7. An indigenous flax, said to produce fibre of very fine quality; seeds might be easily sent. Many of the native plants yield very tough fibres, but no use has ever been made of them. They belong to the genus Pimelia.
8. Indigo (*Indigofera* Sp.), bearing considerable resemblance to the indigo plant of commerce, is found growing luxuriantly in poor sandy soils; its qualities have never been tested.
9. Any of the game, song birds, or large fresh-water fish, belonging to the northern temperate zone would be valuable.
10. Two years ago an Acclimatisation Society was started in Hobart Town, and an unsuccessful attempt was made to obtain a grant-in-

aid from the Tasmanian Parliament. It is feared, however, that the Society will shortly be extinct, as the funds at its disposal are quite insufficient to carry out any of its objects. Five Commissioners have been appointed by the Tasmanian Government to superintend the arrangements for the introduction of salmon to the colony, to whom the sums voted for the purpose by the Victorian, New Zealand, and Tasmanian Parliaments have been intrusted. All other work connected with acclimatisation in Tasmania will probably henceforth devolve upon our Royal Society, whose members have invariably exerted themselves in this direction.

HONG KONG.

1. The sheep and ox of China would do well in Great Britain. The pig has already been exported largely hence to England. A useful experiment might be made by introducing the powerful and hardy Tartar pony from the North of China. All these animals are easily and cheaply procured, and are likely to bear transport well.
2. The fowls of China are well known at home. The local pheasant might be introduced with advantage. These are easily got.
3. The fish of China will not bear comparison as food with those of the British seas. For ornament the gold fish are to be mentioned.
4. None but the silk-worm.
5. There is no timber here to be noted as excelling in use, but the neighbouring island of Leuconia (Manila) abounds with wood most valuable for shipbuilding, &c. A report on the woods of Manila was made to the Colonial Office, for the use of the Admiralty, in Despatch No. 141, of 18th August, 1859.
6. The Colonial Surgeon suggests the Sü Kwan Chee, the seeds of which are invaluable for the treatment of worms in children, as they may be boiled or roasted, and are eaten as readily as chestnuts.
8. The vegetables esculent peculiar to this place may be named the note cok (not indigenous, but imported from the Cape of Good Hope), the yam (*Dioscorea batatis*), Indian corn, bamboo roots, tomatoes, and egg plants. There are also peculiar species of cabbage and potato. No information can be given as to the probability of the above flourishing in Europe; but as they are almost all seen in perfection here in the cold weather, the likelihood is that they would succeed at home.
9. Experiments in this way are made here from time to time.
10. There is no present prospect of organising a Society with this view. The task of introduction is, as stated in the last answer, undertaken irregularly by individuals.

JANINA (Albania).

5. Pine, walnut, ash. The plane also is indigenous here; it is deciduous, requires heat and well-watered ground, attains great size, and when in foliage is one of the most beautiful of trees; its timber is tough and close-grained, and is well fitted for furniture and all sorts of cabinet work.
6. There are many, but they are known only to the empirics of the country, who, inheriting the knowledge of them, and transmitting it as an heirloom to their children, will on no account divulge the secret.
9. (*a*) Rams and stallions of superior breed; (*e*) cotton.

LIMA (Peru).

1. *Cervus antisiensis* (F. Cuv.), *Canis azarce* (Fox.)
2. *Phœnicopterus igni palliatus*, *Quirquidula cyanoptera* (Veill), *Q. Creecorides* (Veil), *Discors* (Wilk), *Versicolor* (Veil), *Dafila Bahamensis*

(Sin), *Rhinchaspis Maculata* (Zey), *Erismatura ferruginea* (Eyton), *Oedichmus superaliares* (Psch), *Crotophaga cassu* (Less).

3. *Corvina deliciosa*, *Corvina minor* (Ts.)
5. *Jacaraudia acutifolia* (D.C.), *Salor Humboldtiana* (Bow), *Sanbucus Peruvianus*.
6. *Culcitum*, Sp., *Guaphalium Verravira*, and a species of *Cryptochæte*.
8. *Jetropha api* (Poll.), *Arracho esculenta*, *Batatas edulis*, *Amond Cherymoha*, *Persica gratissima*, *Lucuma*, *Abbooata*, *Bumchosia*, *Armeniaca*, *Malprigia setosa*.

MADAGASCAR.

2. Teal and other wildfowl. The dendrocygna, arcuata, and viduata, are very hardy, and would, I think, thrive well at, and prove an acquision to, the Mauritius.
3. The goramy and crawfish.
4. The Hymenoptera bee.
5. The natoo is a fine hardy tree; the wood being compact, of a dark-red colour, is peculiarly suited for the manufacture of furniture, whilst the tree itself would, I think, prove an acquisition to our parks.
6. The *Tanghinia venenifera*, a species of cinchona, the *Mucuna pruriens*, and a Polygala, much used by the natives.
7. Several belonging to the order Asphodeleæ, are found in Madagascar. The rofia palm *Fagus ruffia* is much used for making native cloths and ropes, while another species, called by the natives "avy avy," would, I think, prove useful for the manufacture of millboards, paper, &c.
9. (*e*) Northern grasses, and both species of Trifolium.

Remarks.—The soil of Madagascar, especially on the coast, appears suitable for the cultivation of cotton, though the experiments made as yet to grow this plant have not proved satisfactory.

MADEIRA.

2. Green canary (*Fringilla butyracea*), black cap warbler (*Sylvia atricapilla*).
4. The cochineal.
5. *Orcodaphne*, *O. fœtens*, *O. Persia*, *O. indica*, *Laurus barbusano*.
7. The aloe and the *Phormium tenax*.
8. *Ariem colocasia*, arrowroot (*Curcuma leucorhiza*).
9 (*a*). The Chinese sheep. (*d*). Ailanthus silkworm. (*e*). Ailanthus; chincona, especially of the succubra, calisaya and lancifolia species, grafted East Indian mango, mangosteen plant and bunch grass.
10.—A Portuguese Agricultural Society.

MALAGA.

1. The mule.
5. Pinsapo pine (*Abies Pinsapo*).
6. This district is famous for most medicinal plants, growing in a wild, uncultivated state.
7. The Esparto, bass feather grass, or Spanish rush (*Spartium junceum*, Genet d'Espagne), palmito, or scrub palm (*Chamœrops humilis*), sugar cane trash, *Aloe perfolita*.
8. Spanish mellon, pumpkin, onion, tomata, sweet potato, maize, or Indian corn, fig, grape, almond, olive, prickly pear, or higo chumbo (*Cactus opuntia*).
(9. (*b*) The pheasant and grouse.

MESSINA.

6. None but the castor-oil plant, which is indigenous, and grows spontaneously within this consular district. The young plants may be

obtained at a reasonable rate, and they would bear the risk of transport.

9. None but cotton seed, which might be sown to advantage.

NANTES.

3. Sardine.
6. Tisan.
7. Common aloe; the potatoe.
9. It would require much time to ascertain this.
10. The Societé d'Acclimatation of Paris.

NASSAU.—Nil.

NICE.

3. The sardine and the thunny.
4. The green (tree) frog.
5. Olive, caroub or locust, phytolacco (*Divica*), pepper tree (*Archinus molle*), tobacco tree, and the *Cratugus glabra*.
7. The American aloe.
8. Japan medlar (*Nedficlus Japonica*), bears a yellow fruit in abundance, about the size of an egg, which is much prized as food in summer.
9. (*e*) Rhubarb and early cucumber plants.

NEWCHWANG (China).

4. There is a silkworm reared in the north of this province, which is fed on oak leaves, which yields a peculiar coarse silk, and which I think might, perhaps, with advantage be acclimatised in England, as the climate here (Manchuria), though much colder in the winter than in England, is only a very little hotter in the summer. The worm itself I have not been as yet able to procure, as it is now winter, but I have seen the chrysalis, which the natives here use as an article of food; they average about an inch and a quarter long and an inch and a half in circumference.

PALERMO.

1. The male ass.
7. The American cotton seed.

PARA, (Brazil).

1. The tatu, a species of the Armadillo. The qeada, or deer.
2. Of the parrot tribe—the arara, anaca, maracana, papagio, and peiroquito; of the toucan tribe—the aperema, aracari, and toucano; of the duck tribe—the ananais, maraca, and masacuo; of the snipe tribe—the arancuan crocorado, sesacura, and sevorina; of the flamingo tribe—the guasa, culheira, curicaca, gasca real, garca parda, gairota, and magoari; of the eagle tribe—the ama, licorne, and gasiao; of the crane tribe—the jaburn, mulac, and cuaua; of those which are very beautiful or easily domesticated—the galo da cerra, prissoca, thessoura, rosingoe, guissiasu, tenten, and pombas.
3. Tainha, bagre, cacao, douade, filhote mucu, mapasus, piracucu, sardinha, &c.
4. There are myriads of insects, mostly unknown, but requiring time and money to collect.
5. There is said to be the finest and most durable timber for ship building in the vast plains bordering the whole of the great Amazon, possessing the singular quality of incombustibility as well as impenetrability by insects. There are also eighty-four species of wood used for ornamental building and veneering purposes; some most beautiful.
6. Anthelmintics, diuretics, emetics, drastics, emenagoges, &c.

8. Balata, bread tree, macashera, a species of yam, the sweet potato, and some species of melon.
9. (*a*) A few good horses would be most acceptable, and cattle of all kinds.

PARIS.

1. The Imperial Jardin des Plantes, and the Société Imperial d'Acclimatation, of Paris, possess almost every sort of introduced quadrupeds, deer, sheep, rabbits, kangaroo, &c., &c., all likely to bear the risks of transport, but to give an account of their respective probabilities of reproduction would entail heavy expense.
2. The same Imperial establishments contain an immense number of all sorts of birds.
3. The same Imperial establishments contain some, but in less number.
4. The same Imperial establishments contain some.
6. Many in the Jardin des Plantes.
7. Very few, if any.
10. The Société Imperiale d'Acclimatation.

PATRAS.

5. The trees of Greece are known, and those that will bear the climate exist in England.
7. The aloe.
9. (*e*) Shumac plant.
10. No such organisation exists, and the Greeks are too poor, and the country too unsettled, to allow them to think of such things.

PRINCE EDWARD ISLAND.

2. The *Tetras umbellus*, or ruffled grouse.
3. Varieties of the oyster.
8. The sumach (*Rhus Virginiarum*).
9 (*c*). The turbot and the sole.

RAGUSA (Austria).

5. Vine, olive, palm, and mulberry.
6. *Chrysanthemum Turcanum.*
7. *Agave Americana.*
9. (*d.*) The sponge of Curgela, Meleda, and Tergosta.

REUNION.

2. Madagascar teal, large quail, cabook, turtle dove, blackbird, aigrette, or heron.
3. The gourami.
5. The natte.
6. The agane (*Faux aloes*), the bacoa (*Pandanus utilis*).
8. The pepangaille of India, and chou-chou of Brazil.
9. (*a*) The rabbit. (*b*) The partridge, the pheasant, and any insectivorous bird. (*c*) The perch and tench. (*d*) The silkworm.
10. An Acclimatisation Society.

ROSARIO (Santa Fe, Argentine Republic).

1. The horse, cow, sheep, and mule.
2. The cardinal and the ostrich.
3. The dorado, the bagro, the pekore, and the mojora.
6. The rais (or root) of melçonçillo.
7. The chuguar.

SANDWICH ISLANDS.

2. Sandwich Island goose.
5. The Avavia Hau (*Calophyllum inophyllum*), *Cordia Sardro*, kanivila, lama, mamani, and the sandalwood.
7. Wild cotton; there is also a tree which produces a sort of vegetable silk.

6. The awa.
7. Nanket bunssonetia papyrifera, mamake, *Procris alba* and *enclastoma folia*, nerandia, urtica, bread fruit, olona, a species of elatostemma, palm plants, tree-ferns of the genus *Cobotiana*, with the palm, bark of the hau, *Elæocarpus vifidus*, the domesticated *Tourvroga gigantea* and *Agave Mexicana*.
8. The kala, *Colocasia esculenta*, ornamental *Colocasia macrorhizon*, several species of yam, *Dioscoræa bulbifera*, *alata*, and *pentaphylla*, sweet potatoes (*Batatas*), in many varieties, the *Tacca pinnatifida*, yielding a fine arrowroot, several ferns with edible roots (*Cibotium Chamieron* and *Nesyicris*, *Marattia alata*, *Nephrodium ogatheower*, Ki-Cordyline ti, bread fruit, cosvant, many species of banana, Ohia apple (*Jambosa malacensis*), and the guava. Many fruit trees and plants have of late years been imported from foreign countries. The most useful fodder grass is an imported one, *Cynodon dactylon*. The leaves of the *Cordiline ti* are a valuable fodder.
9. (*a*) Alpaca. (*d*) Cochineal. (*e*) Cinchona tree.
10. The Royal Hawaia Agricultural Society.

SAN FRANCISCO (California).

2. The mountain quail, (*Callipepla picta*, of Gould) is the only desirable bird I know of for the Society to introduce into England; it is hardy, and nearly double the size of the ordinary quail of either this country or Europe. The dusky grouse, a very fine bird, is found very high up in the mountains, but it would be very difficult to procure, and very doubtful if it would thrive except on mountains.
5. The pine and cyprus.

SANTANDER.

5. Cork tree, encina, orange and lemon.
8. All kinds of vegetables grown in England thrive here in the open air a month in advance. On the other hand several indigenous ones require hot-house treatment in England.
9 (*e.*) The alpaca.
10. Agricultural Societies at Madrid, Barcelona, Valladolid, Santander, &c.

SERVIA.

8. Maize.

SIERRA LEONE.

2. The partridge and several kinds of pigeons.
5. The African oak and some other hardwood trees.
9. (*a*) A better breed of cattle for milk; sheep would be very desirable. There is an extraordinary epidemic amongst horses here, which die from what is called loin disease. It would be a great benefit if some remedy could be discovered.

SOUDAN.

1. Camels of a better description than are produced in Egypt, and more likely to adapt themselves to the climate of Australia. Easily purchased from £3 to £4 each.
2. Bustard (*Otis nuba*), readily obtained in Sennaar Taka and Kordofan. Ostrich, desirable, I should think, in Australia, the young of which are to be obtained in Sennaar Taka and Kordofan, for one shilling each.
3. Garmoot, is excellent food, and being hardy, might perhaps bear acclimatisation elsewhere.
5. Jogân and kootett, two species of ebony; seeteck, a species of *Anogeisus leiocarpus*.
7. Usher (*Catotropis procera*)

SOUKOUM KALE.

1. I only know of the pine-marten, which is indigenous in this part of the Caucasus. Its skin is an important article of commerce, and is exported solely to the interior parts of Russia. This little animal may possibly be acclimatised to advantage in Great Britain. It may be caught alive here, but I cannot answer for its bearing the risk of transport on so long a voyage as that to England.
5. Box tree, remarkable in this country for girth, colour, and freedom from knots. A quantity of this timber is annually exported to Constantinople, and thence to the English markets.

Remarks.—When the political condition of this country shall have become more settled, and foreigners be allowed to travel about unmolested, much information that is valuable to the Society may be brought to light.

ST. CHRISTOPHER.

1. The agoute.
2. The quail (*Tetro columix*).
6. The castor-oil plant (*Ricinus communis*), and tobacco plant.
7. The cotton plant.
8. Yam (*Dioscorea*), sweet potato (*Batatas*). Food-bearing trees or plants from tropical countries would be beneficial if introduced into this island.
10. None exists, but it could easily be called into existence to undertake the task of introduction if thought advisable.

STETTIN (Pomerania.)

9. Several vegetables have recently been introduced by Pomeranian branches of the Berlin Acclimatisation Society, as *Phaseolus turcicus*, &c.
10. Branches of the Berlin Acclimatisation Society, Pomeranian Agricultural Society, and Agricultural Academy at Eldena.

SAINT LUCIA (West Indies).—Nil.

ST. MICHAEL'S (Azores).

5. *Laurus tudica*, *Laurus fœtans*, *Olea excelsa*.
10. An Agricultural Society.

ST. THOMAS (Danish West Indies).

1. The Dasyprocta Aguti.
2. Quail (*Ortyx Sonninie*), Virginian quail (*Ortyx Virginianus*).
5. *Swietenia mahogoni*, poniciameleta, nutmeg, clove, cinnamon, and camphor.
6. *Cassia obtusifolia*, *Aloe vulgare*, and *Andropogon citratum*, lemon grass.
7. *Bromelia penguinea*.
8. *Bromelia ananas*, *Panicum jurentorum*, Guinea grass.

ST. VINCENT (West Indies).

1. Agouti (*Cavia agouti*).
2. Ramier (Columba), mountain dove, ground dove, *C. passenio*, Parrot (*Psittacus Guildingii*).
3. Cavally (*Scomber chlonas*), Spanish mackerel (*Scomber saliens*), jack (*Scomber trachurus*), Ballatroo (*Esox Brasiliensis*), river mullet (*Mugil plumiere*)
4. Large firefly (*Elater noctilicus*).
5. Green heart (*Lonchscarpus violaceus*, or *sericeus*), bullet (*Mimusopa globosa*, fiddle-wood (*Citharexylum*, *cirenium*, or *melano-cardium*), mastic, white cedar (*Bignonia leucoxylon*), locust (*Hymenœa courbaril*).

6. The *Cassia obovato*, *Cassia pistula*, *Smilax sarza*, and other species, producing sarsaparilla. *Cissampeles pareira* and *Quassia amara*.
7. *Hibiscus elatus*, *Agave Americana* and *vivipara*, May-pole; *Bromelia karcias penguis*, *Ananassa*, Indian pine, fibre, known as lapile; *Cocas aculeata grugru*, *Pothos*, *Pitcairnia*, two species silk grass; *Heliconia citræ*, wild plaintain; *Musa paradisiaca*, plantain; *Musa sapientum*, banana.
8. *Christophine sectium edule*.
9. (*a*) The Monguso, Angora goat. (*b*) Aylesbury ducks, mallu fowl, curassow, Ceylon, or other wild pea fowls, pheasants of all kinds, partridges, quail, crown pigeons, and pigeons of any kind, except the domestic pigeon. (*d*) The common honey-bee, the Ligurian bee, and the castor-oil silkworm, attacus, and cynthia. (*e*) Plants or seeds of the South Sea Island tara, of black pepper, of the different species of tea, of Paraguay tea, of the Sierre Leone peach, of the palm oil, of the sago and taliput palms, of the male bariboo.

SYDNEY (New South Wales).

1. The great red kangaroo (*Osphrantu rufus*), Boomer Forrester, "old man," or great grey kangaroo (*Macropus major*); black Wallaroo (*Osphrantu robustus*), brush-tailed rock Wallaby (*Petrogale penicillata*), rufus-necked Wallaby (*Halmaturus ruficollis*), black Wallaby (*Helmaturus malabatus*), Pademelon Wallaby (*Helmaturus Thetidis*), bettong, or kangaroo rat (*Hypsiprymnus murinus*). There are two small, but very beautiful kinds of flying squirrel: the sugar squirrel (*Belidens sciurens*) and the short-headed Belidens (*Belidens breviceps*). The other larger species of flying squirrel is the long-tailed Belidens (*Belidens flaviventris*). A very pretty animal is the brush-tailed Phascogale (*Phascogale penicillata*), and the rabbit-rat (*Hapalotis albipes*). The rufous jerboa kangaroo (*Bettongia rufescous*). Among the opossum tribe the following could be procured:—Vulpine opossum (*Phalangista vulpina*), short-eared opossum (*Phalangista canina*), ring-tailed opossum (*Phalangista Cookii*), and the woolly opossum (*Phalangista laniginosa*). Of the bandicoots there are two species, the *Parametis nabuta*, or long-nosed bandicoot, and the *P. obesula*, or short-nosed bandicoot. Wombat, or "badger" of the colonists (*Phascolomys wombat*). The koata, native sloth, monkey, and native bear of the colonists (*Phascolaretus unereus*); water-mole, or Platypus (*Ornithorhynchus paradoxus*), and *Echidna hystrix*, or native porcupine ant-eater.
2. The bustard or turkey of the colonists (*Otis Australis*), the Wonga-Wonga pigeon (*Leucosurcia picata*), brown-winged pigeon (*Phaps chalcoptera*), fruit-eating pigeon (*Carpophaga magnifica*), white-head fruit pigeon (*Carpophaga leucomela*), spur-winged plover, pewit, or alarm-bird of the colonists (*Lobivanellus lobatus*), Australian land-rail (*Rallus pectoralis*), red-bill (*Porphyris melanotus*), Nankin or quaker heron (*Nycticorax Caledonicus*), brush turkey (*Talegalla Lathami*) semi-palmated goose (*Anseranas melanoleuca*), wood-duck (*Bernicla jubata*), black duck (*Anas superciliosa*), teal (*Anas punctata*), black swan (*Cygnus atratus*), New Holland Cercopsis (*Cercopsis Novæ Hollandiæ*). The following may be introduced for ornament, and as zoological luxuries:—Lyre pheasant (*Munura superba*), satin bird (*Ptilonorhynchus holosericeus*), regent (*Sericulus chrysouphalus*), rifle (*Ptiloris paradiseus*), coach-whip (*Psophodes crepitans*), razor-grinder (*Seisura volitans*), bell (*Myrantha melanophys*), pheasant cuckoo (*Centropus phasianus*), hornbill cuckoo (*Scythrops Nova Hollandiæ*), pheasant's mother (*Orthonyx spinicaudus*), cat-bird (*Ptilonorhynchus Smithie*), native companion (*Grus Australasianus*), jabiru (*Mycteria Australis*), and various species of cockatoos and parrots.

3. The Murray River cod perch (*Gristes Macquariensis*), the perch, and the Australian sardine or sprat (*Megalops setipennis*).
5. The iron bark, box, blue gum, flooded gum, spotted gum, black butt, mahogany, stringy bark, the turpentine (*Syncarpia*), bastard box of the northern districts, a species of *Lophostemon*, and broad-leaved tea-tree (*Callistemon hideroxylon*), red cedar (*Cedrela Australis*), pine (*Araucaria Cunninghamii*), and the white beech (*Vilex*).
6. The *Eucalyptus*, acacia (*Acacia falcata*), *Doryofora sassafras*, and *Smilax glyciphylla*, or the sweet tea of colonists.
7. The *Sterculia heterophylla*, *Brachychiton laridum*, *Hibiscus heterophyllus*, *Commersonia platyphylla*, *Urtica gigas*, *Urtica pholimophylla*, and some one or two grasses and reeds.

TABREEZ.

1. The wild sheep or argali.
2. The perdrix royal (kapké durreh).
3. The nakar.
6. This province would be found to be rich in medicinal plants were a member of the faculty to devote himself to their discovery.
7. The cotton, hemp, and flax.
8. The vine of Azerbidjan.
9. (*e*) The cotton seed.

TAGANROG.

1. The buffalo.
2. The bustard, the strepette, and a variety of wild duck.
3. The sturgeon, the sterlette (a small species of sturgeon), and the soudack.
5. The white acacia.
6. More than probable, were proper researches made.
7. Flax.
9. Insects, trees, plants, birds, and fish.

TAMPICO.

2. The Black Pheasant.

Remarks.—Whether in the future it may be found practicable to extend the operations of the society or not in this country, it is but too evident that any experiments undertaken in the present unsettled state of Mexico can only end in failure and the sacrifice of any money which may be invested for the purpose.

TENERIFFE (Canary Islands).

1. Camel and goat.
2. Fringilla teyde (a variety of the finch).
4. Cochineal.
5. Pitch pine tree, and twenty-two different sorts of laurel.
6. *Virnea mocanera*, *Guanches*, *Cucorum pulverulentum*, *Fagonia cretica*.
9. (*e*). Trees and plants.
10. A garden for acclimatisation at Port Oratava; a society called "Las Amigas del Pays."

TORTOLA (Virgin Islands).

3. Turtle.
5. Bullet wood.
6. An examination of this subject might produce some useful additions to the London Pharmacopœia, if conducted by a competent medical botanist.
7. The cowtor, a kind of wild aloe, and the common date, both of which yield abundance of fibre.
8. I am not aware of anything here especially peculiar to these islands. I venture to suggest to the promoters of acclimatisation the im-

mense value of the guinea grass of the West Indies in the feeding of stock. I have it here flourishing at an exposed elevation of 1,000 feet above the level of the sea, and, notwithstanding a long continuance of drought, it is green and succulent. If it has not been already introduced, I believe that its introduction into Australia would be an immense benefit, especially for stall-feeding cattle in the neighbourhood of towns. It will bear cutting continually, and readily seeds after a little rain, so that it could be propagated without any difficulty, while the yield of fodder per acre would be, I think, far superior to any other kind of grass.

9. I am not aware of any. Not one-fourth part of the natural resources of the islands is yet developed.

REMARKS.—If my remarks in answer to question No. 8 should induce the promoters of acclimatisation to experiment upon the guinea grass (if it has not already been introduced into Australia), I shall be happy to gather and forward a sufficiency of seed.

TREBIZOND.—Nil.

TRINIDAD.

1. *Cavia aguti* (Lin.), agouti France and England; *Cavia paka* (Lin.), lapé France and England; and *Dicotyles torquatus* (F. Cuv.), quoique, France and England.
2. *Columba speciosa*, viellot ramié guigar, France; and *Columba martinia*, (Lin.); perdris, France; quail, England.
5. *Mailura Xanthoxylum*, *Hieronyma*, Sp., *Calophyllum calaba*, *Cedrela odorata*, *Swietenia mahogoni*, *Carapa guianensis*, several *Laurinea*, several *Bignoniaceæ*, *Lecythis idatinion gualeguero*, *Hymenæa courbaril locust*, *Mora excelsa*, *Platymisicium platystashgura*, *Andira inermis*, *Mimosa arborea*, *Cordia geraschanthus*, *Vitex divaricta sio*, *V. capitata*, *Genipa caruto*, *Crescentia cujete*.
6. *Quassia amara*, *Simaba cedron*, *Carapa guianensis*, *Dorstenia contragerva*, *Contareo speciosa*, *Myrayiecrumno frutescens*, *Aristolochia trilobata*.
7. *Bromelia karatas*, *Sanseviera guinensis*, *Musa textilis*, and other species, *Pavonia racemosa*, *P. craiteata*, *Triumfetta semitriloba*, *Malachra capitata radiata*, *Boehmeria nivea utilis*.
8. *Bertholletia excelsa* (Brazil nut), *Guilielma speciosa* (pirijao), *Matisia coldata* (chujia chujia), *Munusops globosa* (ballata), *Panicum jumentorum* (Guinea grass), *Panicum molle*, Siv. (Pora grass), *Tithecalobiam saman jaman*.
9. *Musa enseta*, best cardamon plants, *Nigra fruticans*, *Euterpe edulis*, *Lodoicea Seychellarum*, *Hyphæne Thebaica*, *Attatea funifera*, *Artanthe elongata*, *Ficus Benjamina*, *Santalam album*, *Quocarpus edulis*, *Cinchonas*, others than *C. smeirubra*, which we have and which is thriving, *Bignonia chica*, *Chrysophyllum buranheim*, *C. pyriforme*, *Vittellaria paradoxa*, *Bassia catgrarea*, *Imbricaria maxima*, *Isonandra gutta*, *Diospyrus ebenam*, and other species giving ebony, *D. kaki*, *D. chloraxylon*, *Benzoin officinale*, *Phytocrenee gigantia*, *Anona Humboldtii*, *Monodora Myristica*, *Illicisum anisatum*, *I. religiosum*, *I. sanki*, *Tircunia excellenta*, *Cheirostemon Platanoides*, *Theobrama angustifolium*, *T. Ovalifolium*, *Vateria indica*, *Garinia celebica*, *G. pedunculata*, *G. Cochin Chinensis*, and others with edible fruit, *Hebradendron cambagioides*, *Mesua ferrea*, *Platonia inseguis* (Mart), *Glycosmus citrifolia*, *Feronia elephantum*, *Agle marmelos*, superior varieties of oranges, *Sansium domesticum*, *Sandoricum indicum*, *Erythroxylon coca*, *Sapindas Senegalensis*, *Nephelium sappaceum*, *N. runosum*, *Salacia pyriformis*, *S. Senegalensis*, *S. Roxburghii*, *S. viridiflora*, *S. radula*, *S. Sylvestris*, *Hovenia dulcis*, *Siphonia elastica*, *Croton eluteria* (Swartz), *Spondias mangifera*, *Melanorrhœa usitatatissima*, *Simaruba*

Guianensis, Galipea officinalis, G. cusparia, Teighthus ottaria, T. canceolata, Pterocarpus santalinus, Pakia Africana, Paciharam edule, Vanilla sativa and other species, *Phenacaspernum Amazonicum, Carludoveca rotundifolia, Areca alba.*

10. Botanic Garden.

TRIPOLI.

1. The horse, sheep, goat, horned cattle of an excellent breed, camel, mehri or dromedary, red deer, gazelle, antelope, warran, *Lacerta simus*, leopard, panther, wild cat, jackall, fox, hare, gabora, &c.
2. The eagle, vulture, hawk, ostrich, hubara, safsaf, quail, partridge, and a great variety of water fowl.
3. Fish, of the same species as are found in other parts of the Mediterranean, abound along the coast.
4. Butterflies, myriads of flies, beetles, the scorpion, centipede, and locust.
5. Pines of various kinds, some of very large size, the cedar, cypress, laurel, lorestinas, carrobe, oleandre, olive, arbutus, and the myrtle.
6. The sylphium, lotus, *Cocumis Colounthis*, cemeuria, *Assafœtida*, saffron, and *Hyoscyamus albus.*
7. The *Stipa tenacissima.*
8. The *Arando festiscoides* and the *Attriplex halimus*, both an excellent forage for animals.
9. Many, did but the means of execution exist.

VENICE.

6. The ferococco confervoides *(Fucus confervoides).*

VICTORIA.—(See Appendix C.)

VIGO.

9. Great improvements might be made in the breed of cows, horses, and sheep by crossing them with the English races.
10. The Economical Society of Friends of the country, residing at Santiago.

WEST INDIA ISLANDS.

7. The cotton plant.

ZANZIBAR.

7. A species of Pandanus and the common pineapple
8. The Mohogo or manive.

APPENDIX C.

ANSWERS FURNISHED BY THE ACCLIMATISATION SOCIETY OF VICTORIA,

TO THE ENQUIRIES ADDRESSED TO IT BY HIS EXCELLENCY THE GOVERNOR OF VICTORIA, AT THE INSTANCE OF THE RIGHT HON. THE SECRETARY OF STATE FOR THE COLONIES.

Inquiries Addressed to the Acclimatisation Society of Victoria, by His Excellency Sir Charles H. Darling, K.C.B., Governor of the Colony.

The gentlemen to whom these questions are addressed, are earnestly requested to consider the high importance which will be attached to the answers which they may return, and the service which they will render to the cause of Acclimatisation by endeavouring, to the utmost of their knowledge, to make those answers as full and otherwise as satisfactory as possible.

The main purposes of Acclimatisation are to introduce, acclimatise, and propagate in the United Kingdom and its Dependencies such Animals, Birds, Fishes, Insects, and Vegetables as are likely to be of use or ornament, whether for domestication or for varying the common food of the people, or for manufacturing, or for any other useful purpose; and whose constitution and habits offer a reasonable prospect of successful cultivation. It is obvious that in India, Australia, Canada, the Cape, and other important dependencies, unlimited scope is afforded for almost any variety of experiment.

It is confidently expected that the answers returned to these questions by Her Majesty's Ministers, Governors, and Consuls in different parts of the world, will bring together a mass of information on this interesting and highly important branch of knowledge as never has been collected before, and the benefit which these gentlemen will thus confer upon their fellow-countrymen will be in proportion to the fulness and exactness with which those answers are drawn up.

In replying to Questions 1, 2, 3 and 8, it is particularly requested that those special qualities which recommend the Quadrupeds, Birds, Fishes, and Vegetables as fit for food or domestic utility, may be described. As regards Quadrupeds, Birds, and Fishes, it will be very desirable to collect all the information which can be got as to the best modes of feeding, keeping, and rearing the same; and, as regards Vegetables, any information as to the best mode of cultivation.

A copy of the last Annual Report of the Acclimatisation Society of Great Britain accompanies this, and will serve to explain more completely the action and purposes of the Society.

1. Is there any quadruped, indigenous or introduced to the country in which you reside, which (having regard to the above definition of the objects in view) merits attention with a view to acclimatisation in Great Britain or

any of its dependencies? If there be any such, state whether it is attainable at a reasonable rate, and whether it is likely to bear the risk of transport.

2. Is there any such bird?
3. Is there any such fish?
4. Is there any such insect?
5. Is there any such timber tree?
6. Is there any such medicinal plant?
7. Is there any fibrous plant likely to be useful for manufacturing purposes?
8. Is there any vegetable suitable for the food of man, or for forage, or for any other useful purpose?
9. Do you know any quadruped, bird, fish, insect, tree or plant existing elsewhere, the introduction of which to the country in which you reside, would be likely to be beneficial; one of the objects of the Acclimatisation Society being to reciprocate the benefits which it receives from other countries?
10. Does any organization exist, or could it be easily called into existence, capable of undertaking the task of introduction?

Any remarks founded upon special knowledge or local information, capable of being made useful to the progress of Acclimatisation will be desirable.

Reply to His Excellency's Communication.

May it Please Your Excellency,—Herewith I have the honour to enclose the answers to the series of questions which was laid before the Council of the Acclimatisation Society by your Excellency. The papers now enclosed were drawn up in the first instance by a sub-committee, consisting of Dr. Mueller, Professor McCoy, and Dr. Madden, and were then carefully revised and amplified by the whole Council, and the Council trust that the form in which they now hand them to your Excellency will compare favourably with that of the answers of a similar nature which are now being sent into the Colonial and Foreign Office from all parts of the world.

I have the honour also, by request of the Council, to beg that your Excellency will, in forwarding these replies to the Duke of Newcastle, at the same time intimate to his Grace the strong desire of the Council to possess a complete copy of the other replies received. The Council cannot but feel that those answers will form a most interesting, and at the same time, a most trustworthy guide-book to the Acclimatisation Societies in their endeavours to extend their usefulness, and they would regret extremely if the mass of information got together at such an expense of time, and with so much effort, should not be utilized to the utmost possible extent by making common property of such information.

I have the honour to be, Sir,
Your Excellency's most obedient Servant,
EDWARD WILSON, *President.*

Answers to the foregoing Inquiries.

Question 1.—Is there any quadruped, indigenous or introduced to the country in which you reside, which merits attention with a view to acclimatisation in Great Britain or any of its dependencies? If there be any such, state whether it is attainable at a reasonable rate, and whether it is likely to bear the risk of transport.

Various *marsupiata*, from the larger species of kangaroo to the kangaroo rats, would be worth transferring from Victoria to countries of a similar

climate. Their flesh, however, with the exception of that of the bandicoot, which is superior to rabbit, is scarcely equal to that of most other game, though their skin furnishes a good kind of leather. From their peculiarity of form, and their eccentric movements, they would constitute a very interesting feature in parks; and from their speed they might furnish a valuable addition to objects of sport. The transit of these animals is attended with no great difficulty, when they are once tamed.

The porcupine anteater (*Echidna hystrix*) might be a desirable acquisition anywhere in the warmer temperate zones. Its meat is excellent. This animal may possibly prove hardy in the southern parts of Britain, as it ascends the Australian Alps in the summer season. In transport, these creatures require great attention, as during voyages they have to be fed on a milky food and eggs.

QUESTION 2.—Is there any such Bird?

Of the few which Victoria can offer, the emu (*Dromaius, Novæ Hollandiæ*, and *D. irroratus*) stands foremost as a bird desirable for naturalisation in other similar climates. The great ease with which its transit can be effected when small, the fair food which the flesh of the young bird affords, the adaptation of this bird as well to a sub-alpine as tropical clime, its contentedness with very indifferent food, its great size, its abundant oil (used by the colonists for medicinal purposes), its harmlessness, the value of its eggs, tend all to recommend it for introduction into many other countries. Its fecundity is considerable, as frequently eight to fourteen birds are raised from the same nest. It would, with care, prove hardy in British parks.

The native turkey or bustard (*Otis Australiana*) deserves every attention: it is easily kept in captivity, and is thus readily available for transit, and in size and excellence for the table is fully equal to the European bustard. It is not, however, prolific, and is therefore not very valuable in a strictly utilitarian point of view.

The Wonga-Wonga pigeon (*Leucosarcia picata*) is so large and excellent for the table, that it may be particularly recommended for transmission to other warm, temperate countries.

The mallee hen (*Leipoa occellata*) could be readily naturalised in South Africa or the South of Europe, and has lately been kept with little trouble in a domestic state, laying a large number of delicate eggs of a surprisingly large size.

Our quail, of several species, are objects sought by the sportsman; they are also excellent for the table, readily kept in confinement, and therefore may be easily conveyed into other countries.

The so-called magpies (*Gymnorhinæ*) and laughing jackass (*Dacelo gigantea*) merit, as vermin-destroying animals, introduction into other sub-tropical and warmer extra-tropical regions, and by the robust, jovial humour of their merry pleasant notes and quaint manners, would form most desirable additions to British parks.

The black swan (*Cygnus atratus*) not merely deserves attention on account of its ornamental appearance, but also for its down and for its flesh, which, when obtained from cygnets, is excellent food. Both of these can be supplied in considerable numbers.

The Cape Barren goose (*Cereopsis Novæ Hollandiæ*) is deserving of introduction into Britain and its colonies of milder climate.

Other geese and ducks, for instance, *Anseranas leucogaster*, *Anas superciliosa*, *Bernicla jubata*, *Casarca tadornoides*, *Malacorynchus membranaceus*, could no doubt be taken, with a view of naturalization, advantageously and readily to other parts of the globe; they are all good for food, and the first is very

easily domesticated, while the second breeds now readily in company with the European wild duck, which it meets in the wild state, as introduced by the Acclimatisation Society of Victoria.

QUESTION 3.—Is there any such Fish?

The so-called Murray cod or cod-perch (*Oligorus Macquariensis*) is the most important fish, which could be transferred from Australia to the fresh waters of other countries stretching through the milder parts of the extra-tropical zone. It not unfrequently is sent to the markets of a size weighing from twenty to thirty pounds, and even attains a weight of eighty or one hundred pounds, and the flesh is sufficiently good to take first or second place in the dinner *carte*. Its principal food is the smaller river crayfish (*Astacus quinquecarinatus*), but it eats the smaller fish also. There seems to be no reason why the young fish should not as readily be carried in ordinary glass globes over sea as many other fresh water fish. Supplies could be secured for this purpose with facility, owing to the ready communication we have by railway with the Murray River, or in smaller quantity from the southern rivers of Victoria, to which it has been already transferred. Some other fresh water fish of the Murray are even preferred to the cod-perch for the table, as the silver perch (*Cernua Bidyana*) and golden perch, and a few others, but they are not of great size, and perhaps not equal to many European kinds in flavour.

QUESTION 4.—Is there any such Insect?

None of the insects of Victoria are at present known to possess properties rendering them worthy of transmission to other countries, with a view to their naturalisation, although some of the *Cocci* infesting the *Acaciæ*, or common wattle trees, in great numbers, afford a fine purple dye.

QUESTION 5.—Is there any such Timber Tree?

The Victorian timber trees, with few exceptions, are not likely to bear the climate of Britain; and in the South of England and Ireland, where a few species have been acclimatised, they can only be viewed as objects of curiosity or ornament.

But in warmer regions, especially beyond the tropics, where it is of importance to raise trees in woodless districts, none could be chosen for this purpose surpassing, and but few equalling, certain species of ours in rapidity of growth. Thus in Natal, and in other countries where fuel is excessively scarce, they might be raised most readily from seeds in the utmost profusion.

In some of the lower regions and plateaus of the highlands of India our trees would be equally eligible for raising shelter plantations, and furnishing, finally, fuel and material for artisans.

The most important timber tree which we can offer is the blue gum tree (*Eucalyptus globulus*). It is most readily raised from seeds; and the seedlings, when a few months old, are easily transplanted during cool and humid weather. In rapidity of growth this tree excels perhaps all other trees of the globe; in regard to size, it must be reckoned amongst the most gigantic productions of the vegetation of the world; for durability of its timber, and its resistance against decay as well in water as underground, it is excellent, and it is eligible for most purposes where a hard and heavy wood is needed. The tree, although chiefly a natural production of humid valleys, nevertheless resists well the influence of great heat and of hot winds.

Several other *Eucalypti* are of nearly as much importance for introduction into several of the British colonies. Thus the red gum tree (*Eucalyptus rostrata*) grows also with remarkable celerity, and is recommended especially for plantations in depressed ground. Its wood is extremely durable, very suitable for underground work, piles of wharves, &c., susceptible of an excellent polish, and affords superior fuel. It is, like all other *Eucalypti*, most readily raised from seeds. *Eucalyptus amygdalina* is also a timber tree of quick growth, and besides is remarkable for the extreme abundance of volatile oil in its foliage.

The Stringy Bark Tree *(E. obliqua)* is the most to be recommended where a tree is sought for extensive plantations on barren ranges, and where a fissile wood for fencing purposes is required; it attains also gigantic dimensions, and its stem is almost invariably of a beautiful straightness. The bark furnishes material for rough paper.

The other large *Eucalypti* eligible as timber trees are *E. goniocalyx, E. corymboso, E. botryoides, E. Woollsii, E. coriacea, E. Leucoxydon, E. Gunnii, E. viminalis, E. odorata and E. persicifolia.* The last is the famous Ironbark tree, so singular for the toughness and durability of its wood.

Some *Acaciæ* of Victoria are also of great celerity of growth, amongst which *A. mollissima* is the most eligible. It is, however, neither a large nor a lasting tree, but of great value for the quick shelter it affords when raised for protection of other plantations; it yields, moreover, a gum similar to that of gum arabic, and also a good kind of tanner's bark.

The W. Australian *Acacia lophantha*, generally introduced here, is also highly suitable for the quickness of its growth and readiness with which it can be raised as a temporary shelter tree, though never attaining a large size. Of all our Acaciæ, however, the most valuable is the Blackwood tree, *Acacia melanoxylon*, on account of its beautiful furniture wood, which has been with the greatest advantage used for elegant and durable cabinet work, for railway carriages, &c. The tree attains great dimensions in fertile, especially irrigated ground, and is readily raised from seeds.

Acacia homalophylla, though but a small tree, is much sought for its dark, scented, heavy wood, well known as the Myall-wood; this plant is restricted to the desert country.

QUESTION 6.—Is there any such Medicinal Plant?

As far as known, the only plant restricted to these parts of Australia, and not merely used as a substitute for other species in the *Materia Medica*, is the Sassafras tree of Victoria and Tasmania *(Atherosperma moschatum)*. Its bark is a powerful tonic, of which the efficiency seems mainly to rest in a peculiar alkaloid; it yields also a volatile oil, of which the especial therapeutic properties have to a great extent as yet to be ascertained. The tree can, however, only be naturalized in deep, springy, forest ravines, of countries with a climate analogous to that of Tasmania and of the southern parts of Victoria.

It is, however, not to be overlooked that several *Acaciæ*, especially *A. pycnantha* and *A. mollissima* yield a copious supply of gum similar to that of gum arabic; and as both trees are of extremely easy growth, they might even on that ground deserve the attention of cultivators abroad.

The native Cypress Pine *(Callitris verrucosa)*, a tree easily and rapidly growing in sandy soil, yields a kind of Sandarach resin.

The myrtaceous trees and shrubs are all more or less rich in ethereal oil, which in many instances greatly resembles the medicinal Cajuput oil. *Eucalyptus amygdalina* has yielded nearly 4lb. of oil from 100lb. of fresh leaves, several other species yield also a large return of oil; which has proved most useful for admixture with other essential oils in the manufacture of soaps, *Melaleuca linearifolia* has furnished $1\frac{3}{4}$lb. from 100lb. of leaves and branchlets. These oils have attracted attention as not only medicinally valuable, but

also as solvents for various kinds of superior varnish resin, and for illuminating power *(vide Jurors' Report of the Victorian Exhibition of* 1861).

As medicinal products, the astringent gum-resins of various *Eucalypti* likewise deserve attention, all species exuding more or less of this substance.

There are plants in this country yielding excellent substitutes for the following drugs: Gratiola, Mezereum, Winter's Bark, Mint, Gentian, Lobelia, Althæa, &c.

Question 7.—Is there any Fibrous Plant likely to be useful for manufacturing purposes?

The *Cyperus vaginatus*, a sedge of extreme abundance in some of the humid depressions of the colony of Victoria, produces a remarkably tenacious fibre, which by the aboriginal population was once largely employed for cordage and for making their fish-nets. This plant is certainly deserving introduction into other countries.

The Australian Flax *(Linum marginale)* seems to have no claims to be introduced elsewhere in preference to that species which has been cultivated for ages, unless for its perennial duration.

Two fibrous plants introduced here appear to hold out the greatest prospect for lucrative introduction into several other regions of the globe, viz., the New Zealand flax *(Phormium tenax)*, which could be cultivated without any protection in the southern parts of Britain, and which may be grown in inundated places not readily available for other cultivation; and, secondly, the Rhea *(Bœhmeria nivea)*, from which the Chinese grass-cloth is made. The latter plant has proved quite hardy and luxuriant in Victoria. Both are most easily grown and multiplied, and ought to be naturalized in all tropical and temperate latitudes.

The fibres of *Sida pulchella*, *Brachychiton populneum*, *Pimelea axiflora*, several Stipa-grasses, although not without value to us here on the spot, are apparently not of sufficient importance to entitle their respective plants to an introduction into other countries.

Question 4.—Is there any vegetable for the food of man, or for forage, or any other useful purpose?

Of culinary vegetables indigenous to Victoria, we have three kinds of spinach. One of these *Tetragonia implexicoma* is a littoral plant, and for practical purposes similar to the well-know New Zealand spinach. It is perennial, expanding and climbing to a wide extent, and might be advantageously transferred to every sandy and rocky seashore of the globe, wherever it will prove hardy. Seeds are very seldom obtained, and hence the plant has to be exported in a living state. The second is identical with the New Zealand spinach *(Tetragonia expansa)*; it belongs not only to the Victorian sandy coast, but also to the desert. By means of seeds it can without difficulty be introduced, as is well known, into other countries; it occurs wild also on the sub-tropical east coast of Australia, and might be introduced into hot climates.

The third kind of spinach alluded to is that of *Chenopodium auricomum*. This plant is still more valuable than the *Tetragoniæ*, being more palatable and more nutritive; it grows also in tropical Australia, and will thus endure the climate of many warm parts of the globe.

Of fruit plants we have scarcely any deserving introduction elsewhere, unless perhaps the Quandang *(Santalum acuminatum)*; for although it is far inferior to the ordinary fruits commonly under cultivation, the fact of its being a desert plant, not becoming parched by Sirocco-like winds, entitles it to consideration.

Of forage plants we have some excellent grasses, well deserving of introduction abroad; thus for countries of warm climate the perennial kangaroo grass *(Antistiria Australis)*, would be eligible, as well as *Panicum decompositum*, and several other grasses, chiefly belonging to the genera *Punicum*, *Danthonia*, and *Agrostis*, of which seeds can be obtained with ease.

An excellent tender swamp grass is *Danthonia nervosa*, and a splendid forest grass the recently discovered *Festuca dives*. For countries with a colder climate three of our taller and yet tender-leaved alpine grasses might advantageously be selected, viz., *Festuca Hookeriana*, *Danthonia robusta*, and *Hierochloe antarctica*.

A magnificent American fodder grass *(Bromus unioloides)* has become sufficiently plentiful here in cultivation to render seeds available for redistribution.

Question 9.—Do you know any quadruped, bird, fish, insect, tree, or plant existing elsewhere, the introduction of which to the country in which you reside would be likely to be beneficial: one of the objects of the Acclimatistion Society being to reciprocate the benefits which it receives from othercountries?

Quadrupeds.—Besides additional numbers of any of the valuable animals appearing in the list of those already imported by the Acclimatisation Society, such as the hog deer, Manilla deer, Axis deer, Formosa deer, Rusa deer, English hare, &c., &c., the following may be named:—

The Cape hare *(Lepus Capensis)*.

The *Lepus Americanus*.

The Chinchilla of S. America *(Chinchilla lanigera)* would be desirable for its fur, as the climate and abundance of small bulbous roots in the ground would probably suit it perfectly in the wild state.

The spring haas *(Helamys Capensis)* or leaping hare of the Cape, for sandy and stony desert tracts in the northern districts, is desired, in the hope of adding to the very scanty food to be found by the explorer or pioneer in such localities, to which the habits of the animal are well suited; its flesh would prove a welcome meal to many persons engaged in pushing the settlement of this new country.

The gazelle of the Cape is desired, as well as that of North Africa (*Gazella dorcas*), in large numbers to turn loose in the country beyond the Murray, where they would thrive well, and ultimately afford both excellent food and good sport.

The ourebi of Natal (*Scopophorus ourebi*), for grassy northern districts.

The gemsbok (*Oryx gazella*) of S. Africa is desired for sandy northern plains, as it thrives well in parched country, where little else can live, is of good size and most excellent flesh.

The orix (*Oryx leucoryx*) of N. Africa is desired as a fine antelope, feeding on acaciæ and appropriate to a climate like that of the north of our colony.

The eland (*Oreas canna*) of S. Africa is particularly desired, from its great size, excelent flesh, and being able to thrive without water for long periods on parched herbage; it is expected to be a boon of inestimable value to those periodicaly parched northern districts towards which the industry of the colony is extending.

The kodoo (*Strepsiceros kudu*) of S. Africa.

The Californian or Rocky Mountain big horn sheep (*Caprovis ammon*) for mountainous districts of Gipps Land.

The Cape sheep.

The *Cervus Canadensis* for acacia localities.

The red deer (*Cervus elaphas*), roebuck (*Capricolus capræa*), and all other kinds of deer.

The klip daas or dock rabbit (*Hyrax Capensis*) of the Cape.

Birds.—It may be mentioned generally that Victorian famers and gardeners suffer very much from the depredations of insects, and herefore any of the soft-billed birds of Europe, or other temperate countries are desired in unlimited numbers, particularly those which, like the robin *Erythaca rubecula*) and hedge-sparrow (*Accentor modularis*), love the neighborhood of man. The Acclimatisation Society of Victoria has introduced and liberated large numbers of the common sparrow from England, and the tree sparrow from China, to keep down the caterpillar, while feeding their young and the mino (*Gracula musica*) from India, to diminish the myriads of destructive grasshoppers and small locusts; also the song-thrush, to clear away the slugs. But any additional number of these and other such birds would be very welcome. Although in all parts of the colony a great variety of nts are very troublesome, none of the ant-thrushes (*Pittæ*) of India or America have (from the difficulty of keeping them in confinement) been procured, although some of them would probably live well near our northern boundar. Our forest trees, too, are invested with very numerous larvæ in the timbe, while in the whole country there is no representative of the woodpecker appointed in other parts of the world to remedy this evil; and although th difficulty of introducing either the woodpecker or ant-thrush would be very great, still the experiment would be a very curious and important one in its effects.

The serpent-eater (*Serpentarius secretarius*), or secretary bil of the Cape, is desired for the diminution of our snakes.

The crowned pigeon (*Goura coronata*), from Java or New Ginea, has only been very sparingly introduced, and a large supply would b particularly valued of this the largest of the pigeons.

The China pheasant (*Phasianus torquatus*).

The monal (*Lopophorus Impyanus*) and all the other Himalayan pheasants are particularly desired, to be turned loose in the alpine parts of Gipps Land, where both the temperature and the great abundance of small blbs and corms in the ground afford so nearly those natural conditions requisit for successful naturalisation of those splendid, easily-bred birds. A few of them only have been imported by the Society, including the horned and satyr tragopans (*Ceriornis Lathami* and *C. Satyr*), the monal, and two kaligee.

The *Penelope cristata* of South America. A large supply of curassows, two of which, the *Crax alector* and *C. Alberti*, as well as th *Ourax miter*, thrive well here; the two former laying regularly. These re desired, as large and excellent birds for the table.

The sand-grouse (*Pterocles*), both of India and Africa, are desired for the northern sandy districts. Any of the species of Francolins and grouse, as well as all kinds of partridges and quail in large numbers, wil be desirable for some years to come.

The adjutant of India (*Leptoptilus argala*), as a scavenger.

The ostrich (*Struthis camelus*) would, no doubt thrive in our northern sandy country.

The *Cygnus nigricollis*, the black-necked swan of the west coast of South America.

To these must be added a large number of birds, introduced and partially naturalised by the Acclimatisation Society of Victoria, which are required in large numbers for many years, such as the common and gold and silver pheasants, common and red-legged partridge, peafowl, grey and black Indian partridge, any of the more highly esteemed wild geese and ducks, more especially the pintail and its allies, blackbirds, thrushes, skylaks, starlings, minos, &c.

Fish.—The *Cyprinus carpio* and *C. gobio* of Britain, the gourmie (*Osphronema olfax*) from China or Mauritius, and any other palatable pnd-fish.

The salmon (*Salmo salar*), trout (*Salmo fario*), char (*Salmo salelinus*), grayling (*Thymallus vulgaris*), and other principal river fish of Europe. Lobsters and crabs, and the better kinds of fish of European seas. In relation to this suggestion, reference may be made to the fact of several specimens of sea-fish,

consisting of the grey mullet (*Mugil capito*), as also the edible crab, having actually been imported alive fom England, and the gouramie from the Mauritius.

Insects.—The *Bombyx cynthia* and *B. arrindi*, to establish a supply of coarse silk, not requiring labourto feed the worms.

The *Coccus cacti*, the cochineal insect.

Plants.—Amongst the multitude of plants which, finally, no doubt, will be extensively cultivated in Victoria, a few of the seemingly most important may be alluded to on this occasion; as some of these are evidently destined to add to the resources of this counry and to aid in the support of an increasing population.

Recent experiments have shown, that the hardier varieties of cotton are in favourable localities of Victoria producing a remunerative crop. The importation of seeds of the Peruvian tree-cotton and other hardy varieties, on which we have commenced to experiment, should therefore be maintained.

The senna plant also for pratical cultivation has not yet found its way into this colony, where no doub in suitable localities it could be grown to advantage.

On account of its large yied of mealy substance the tropical American cassava (*Tatropha manihot*) is deirable for introduction, with a view of ascertaining whether in our climate i could be cultivated to advantage, its cultivation extending to some extra-ropical countries.

The successful introduction of various species of *Cinchona*, including the valuable *Calisaya*, into various of the British possessions of India, affords the ready means of transferring to us specimens of ascertaining whether these important plants could be acclinatised in favourable mild and sheltered parts of Victoria, as seems from the mean temperature of our climate not impossible, though the *Cinchona* plant inhabit in a natural state mountain regions of the tropics.

Of grasses it would be particularly advisable to obtain for our coast and higher mountain regions the Tussock grass of the Falkland Islands (*Dactylis cæspitosa*), which has been established in the Shetland Islands, and from whence it could probably be furher distributed.

The buffalo grass of North America, *Sesleria dactyloides*, would be highly acceptable.

Our colony being destitute of any pine timber of considerable dimensions, it is important to encourage theintroduction of any larger species of the fir tribe. Canada might furnish uswith supplies of seeds of *Pinus Canadensis*, *P. nigra*, *P. microcarpa*, *P. Strobis*; British Columbia, with *Pinus Douglassi*, *P. bracteata*, *P. nobilis*, *P. ponderosa*, *Sequoia sempervirens*; Nepaul with *Pinus Brunoniana*, *P. Pindrow*, *P. Wbbiana*, *P. Deodara*, *P. excelsa*, *P. longifolia*, *P. Gerardiana*; whilst from British parks the Norway spruce (*P. albies*), the larch (*P. larix*), the silver fir (*P. picea*), and many other ornamental and highly useful pines, might be much more extensively introduced than has hitherto been the case.

Useful plants available in Britain for introduction into Australian husbandry are, among others, the mustard (*Sinapis nigra*, L.) of which the cultivation might prove highly remunerative; amongst medicinal plants, *Aconitum Napellus*, *Podophyllum peltatum* (cultivated in Britain), *Valeriana officinalis*, *Gentiana lutea*, *Colchicum autumnale*, *Crocus autumnalis*. Amongst fruit plants, various kinds of brambles; and, suitable for our higher mountains, *Vaccinium myrtillus*; also the osier willows.

By the co-operation of members of Acclimatisation Societies in various parts of the globe, many other plants could no doubt, on a larger scale, be introduced into Victoria, thoughthey are not available in any British colony; thus, for instance, the huge pines peculiar to California, including the famous *Wellingtonia gigantea*, *Taxodium distichum*; walnuts, and also *Nelumbium luteum* of North America; the oaks of North and Central America, and of the Mediterranean, including the cork oak and the valonia oak (*Q. Juba*

and *Q. Ægilops*); for although many of those are introduced for experimental culture, they are not as yet obtainable for general distribution in this country.

It would further be desirable to transfer from the Mediterranean shores to our colony, where the climate is so similar to that of South Europe and North Africa, the various astragalus bushes, which furnish the gum tragacanth, the argan-tree (which is as yet but very scarcely available here, and particularly valuable as affording in its fruit a most nutritive cattle-food and a vegetable tallow) the *Pistacia lentiscus*, which yields the mastix of commerce, some of the largest fruited varieties of olives, the bergamotte lemon, the *Papyrus antiquorum*, and the *Lawsonia*, the latter yielding an excellent dye, and being moreover valuable as a hedge plant.

From Hong Kong a copious introduction of tea seeds might be effected, the tea plant having proved well adapted to sheltered, fertile spots of Victoria; also from the same spot, the copious transmission of Povenia, Litchi, and Logan seeds.

A remarkable plant, desirable from Peru, is the *Erythroxylon coca*, furnishing the coco leaves, the stimulating properties of which are so well known.

The introduction of the varieties of *Rheum palmatum* and allied species, yielding the medicinal rhubarb root, would also need attention.

The various acacia trees, from which in North Africa and South West Asia the gum arabic is collected, could be most easily naturalised in Victoria, where yet but a few individuals of two or three of these species exist, so that seeds in quantity would be highly desirable.

It would unnecessarily extend the limits assigned to this document to enumerate all the highly useful plants which, although they have found their way more or less generally into our country, require a much wider distribution here than they have hitherto obtained. It may be suggested, however, that importations of plants or seeds of any of the more eminently useful kinds will be always acceptable in a new country like this, where forest culture is not even commenced, and where, in many districts, husbandry is as yet but imperfectly developed.

QUESTION 10.—Does any organisation exist, or could it be easily called into existence, capable of undertaking the task of introduction?

The Acclimatisation Society of Victoria is in vigorous action, and has means for transacting any such business efficiently.

QUESTION 11.—Any remarks founded upon special knowledge, or local information, capable of being made useful to the progress of Acclimatisation, will be desirable.

The replies to preceding questions have been sufficiently complete to prevent the necessity of an elaborate answer to this. It may be remembered, however, that the British Admiralty has lately issued instructions to commanders of Her Majesty's ships in all parts of the world to render any aid possible in the conveyance of specimens; and through such agencies the difficulties of transmission may be greatly diminished if proper opportunities be prepared for.

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ACCLIMATISATION SOCIETY

OF GREAT BRITAIN,

AND

ORNITHOLOGICAL SOCIETY

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SIXTH ANNUAL REPORT.

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(Adjoining the Royal Horticultural Society's Gardens),
AND ORNITHOLOGICAL SOCIETY'S COTTAGE, IN ST. JAMES'S PARK.

ACCLIMATISATION SOCIETY OF GREAT BRITAIN

AND

ORNITHOLOGICAL SOCIETY OF LONDON.

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OFFICES, EXHIBITION ROAD, SOUTH KENSINGTON, W.
(Adjoining the Royal Horticultural Society's Gardens).
AND ORNITHOLOGICAL SOCIETY'S COTTAGE, IN ST. JAMES'S PARK.

RULES.

I.

The objects of the Society shall be the introduction, acclimatisation, and domestication of all useful or ornamental animals, birds, fishes, insects, and vegetables; the perfection, propagation, and hybridisation of races newly introduced or already domesticated;—the spread of indigenous animals, &c., from parts of the United Kingdom where they are already known;—the procuring, whether by purchase, gift, or exchange, of animals, &c., from the British colonies and foreign countries;—the transmission of animals, &c., from England to her colonies and foreign parts, in exchange for others sent thence to the Society;—the holding of periodical meetings, and the publication of reports and transactions, for the purpose of spreading knowledge of acclimatisation, and inquiry into the causes of success or failure;—the interchange of reports, &c., with kindred associations in other parts of the world, with the view, by correspondence and mutual good offices, of giving the widest possible scope to the project of acclimatisation;—the conferring rewards, honorary or intrinsically valuable, upon seafaring men, passengers from distant countries, and others who may render valuable services to the cause of acclimatisation.

II.

The Society shall be governed by a Council of 14 members, exclusive of President, Vice-President, and Honorary Treasurer, three of whom (viz., those who have attended fewest meetings of Council during the past year) shall retire annually, but be eligible for re-election.

If more than three Members of the Council shall be found to have been absent an equal number of times, then the retirement of the three Members shall take place in alphabetical order, beginning with the first letter.

III.

The Council shall have the sole management of the affairs of the Society, and of the income and property thereof, for the uses, purposes, and objects of the Society; and shall have the sole and exclusive right of appointing paid servants, as a manager or secretary, collector, and such other officers, clerks, and labourers, and at such salaries as they may deem necessary, and of removing them if they shall think fit, and shall prescribe their respective duties. And such Council shall have power to consider and determine all matters, either directly or indirectly affecting the interests of the Society, and if they shall think fit so to do, shall bring the same under the notice of the Members of the Society, at any general or special meeting; and to make such bye-laws as they may deem necessary for the efficient management of the affairs and the promotion of the objects of the Society, and for the conduct of the business of the Council, provided the same are not repugnant to these rules; and to appoint one or more sub-committees, for any purpose contemplated by these rules; and generally to perform such acts as may be requisite to carry out the objects of the Society. And it shall be the duty of the Council to exercise the foregoing powers as occasion shall require, and to furnish reports of the proceedings at every periodical and annual meeting of the Society.

IV.

The Council shall meet during the first week of every month, unless by a requisition to the Secretary from four of its members, a more convenient time be appointed. Extraordinary meetings of Council may be summoned by a similar requisition. At any Meeting of Council *three* shall form a quorum. Notice of any change of Meeting shall be given by the Secretary to all whom it may concern.

V.

The Annual General Meeting of the Members shall be held during the first fortnight in May in each year, to receive the Report of the Council and elect one Auditor, an Hon. Treasurer, and three Members of Council for the ensuing year. Notice of the time and place shall be sent to Members at least fourteen days previous to the Meeting, and shall be advertised in one or more of the public papers. The Council shall have the power, either of its own motion, or on the requisition of not less than Ten Members, to call a Special General Meeting.

VI.

The Annual Subscription shall be £1 1s. A Donor of £10 10s. shall be a Life Member. The Annual Subscriptions shall be due on the 1st of January in each year, or within one month of becoming a Member; but in the case of Members elected after the 1st of November, their subscription shall be good until the end of the year next ensuing. When the Subscription of any Member has not been paid on the first day of March for the current year, the Secretary shall immediately apply to the member so omitting to pay his Subscription, and if the same is not paid by the first day of April following, the Council shall have the power of removing such defaulter from the List of Members.

VII.

Persons desirous of becoming Members must be duly proposed and seconded. The names of all Candidates shall be suspended in the office of the Society for fourteen days before the day of election, after which the Council shall, at its next or any subsequent meeting, proceed to election. The Council shall have the power to elect Honorary Members of the Society, and also as Corresponding Assistant-Members (without subscription) such skilled persons as they may think likely to further the objects of the Society; but such persons shall not be entitled to vote at the General Meeting.

VIII.

The Council shall have the power of entrusting (for experiment and multiplication) to Members or other persons, the Animals, Vegetables, or any articles which are the property of the Society, under agreements to be approved of by the Council and signed by the parties.

IX.

The accounts shall be presented at the Annual General Meeting, verified by two Auditors to be appointed from the general body of Members, one to be nominated by the Council, and the other by the General Meeting.

X.

Any Member who shall not comply with these Rules shall cease to be a Member of the Society, and shall lose all right to any of its property.

XI.

The decision of the Council shall be conclusive on any questions which may arise on the interpretation of the foregoing regulations.

B. WATERHOUSE HAWKINS, *Secretary.*

REPORT OF THE COUNCIL.

The Council, in presenting their Sixth Annual Report to the members of the Acclimatisation Society, have pleasure in informing them that they have completed the arrangements with the Council of the Ornithological Society of London for the union of the two Societies, by which they hope to have acquired increased strength, and facilities for carrying out the objects mutually contemplated by both Societies.

They, perhaps, cannot more conveniently bring before the lovers of natural history the objects accomplished by the Ornithological Society, than by quoting a portion of their programme issued some years ago.

"*Many thousands of persons have been gratified by admiring and feeding the water fowl in St. James's Park, but few are aware of the source to which the Public are indebted for this pleasure—few are aware that they may become themselves members of a Society which exists for the purpose of forming collections of water fowl in the various parks, and propagating the most useful and interesting species—first, to supply the royal parks, and secondly, to distribute duplicates among such members of the Society as may be desirous of acquiring a collection of aquatic birds.*

"*The Ornithological Society was established in* 1837. *It has endeavoured to form and maintain a complete collection of water fowl—swimmers, divers, and waders. The birds are kept, as nearly as possible, in a natural state in the waters in Hyde Park, Kensington Gardens, and Victoria Park, and on the island in St. James's Park they may be considered in a natural cage, open to the view of all classes.*"

From this quotation it will be seen that the objects of the two societies are almost identical, and that while the Ornithological Society have restricted their exertions to the introduction of that large class of birds requiring water as part of their natural element, the Acclimatisation Society have been obliged to abstain from assisting their members in obtaining water fowl, owing to their not possessing control over any locality supplied with water. Now, on the contrary, the collection of Water Fowl, belonging to the combined Societies at present in St. James's and other Parks, include the following :—

Mallard.
Pin Tail.
Pochard.
Carolina.
Gadwall.
Teal.
Widgeon.
Tufted Divers.
Shoveller.
Golden Eye.
Black Swans.
White Swans.
Bernacle Geese.
Brent ditto.
Chinese ditto.
White fronted ditto.
Bean ditto.
Canada ditto.
Hybrids (numerous).

The members, therefore, of the united societies may now hope for aid in each branch of ornithology, and the Council will thereby realize the admirable suggestion, made by one of the Vice-Presidents, VISCOUNT POWERSCOURT, who, when recommending the advantages of the union of Societies, stated :—

" The combination of Societies will tend to the benefit of each Society, as bringing them all in a convenient way under the notice of the public. I must compliment the Society upon their having resolved to combine themselves, so as to obtain in the aggregate the largest amount of attraction to the public in the most easily accessible places. I think combination of many attractive subjects will make people observe individual objects better than if each definite subject were

isolated, or by itself. People are so busy now-a-days that assembling things together is a great benefit, by strengthening the effect of the examples shown, and increasing the interest of those who see them."

The subscription to the combined Societies is one guinea a year, which was the amount subscribed individually by the members to each Society; therefore members will have double advantages for the single expense. The life membership to both Societies will remain the same as first established for the Acclimatisation Society—viz. ten guineas, which small sum will continue for at least the ensuing year, the Council holding themselves at liberty to increase that amount, if they see fit during the following year, after due notice.

At page eleven of the Society's Report for 1865 it will be found stated that the Council considered it desirable to authorize their Hon. Secretary, Mr. WATERHOUSE HAWKINS, to enter into negociations with the authorities at South Kensington for a grant of space to erect their fish-hatching apparatus, and office, and council room, for the business of the Society, these views having been acceded to by the Council of the Royal Horticultural Society, the offices of the Acclimatisation and Ornithological Society are now favourably situated at South Kensington, on easy and liberal terms, so that while the item of £86 appears under the head of "rent for offices" in this year's balance sheet, the Council have reasonable hopes that that item will, for the ensuing year, be less than one third of that sum. It is not merely the improved locality of the offices, but the advantages of position in connexion with the Royal Horticultural Society, many of whose fellows are also Vice-presidents and members of this Society.

The Treasurer's audited balance sheet presents the appearance of an increase of expenditure beyond the receipts for the year of 1866, but it will be found on examining the amounts in detail that a portion of those items belonged to the previous year, particularly with reference to the former expenses of fish hatching.

In the reports for 1864 and 1865, it will be seen that the then executive portion of the Council considered it a necessity for the Society to carry out their operations for fish hatching at any sacrifice, consequently the first act of the Council after the General Meeting in May, 1865, was to appoint a Committee to mature a plan for the renewal of their fish hatching operations at South Kensington, to be placed under Mr. Frank Buckland's superintendence, the many floods and the very exceptional season for obtaining fish ova, had nearly defeated even the enthusiasm of Mr. Buckland, when, by the aid of some other friends, an additional supply of Trout and Char ova was obtained, and the Council have much pleasure in stating that, though the quantities supplied were smaller than demanded by members, yet they have reason to know that the majority of the applicants were contented. Mr. Buckland has also given 1,500 young Salmon and a thousand young Trout to the Society, from his own private collection,hatched from ova received by him from France. These have all been offered to members. The Council intend to carry out their former arrangements to secure the introduction of the Sander or Leucio Percha from Germany; and they have much pleasure in announcing that they have received the most liberal promises of assistance, pecuniary and other aid, in order to acclimatize this valuable fish. Of the Silurus Glanis, as reported by Mr. Buckland in page 24 of last year's report, that "on the 27th January, 1865, Mr. Buckland placed eleven of these fish in a pond kindly provided by Mr. Higford Burr, of Aldermaston;" they were then about 14 inches long and about a quarter of a pound weight, where they were fed regularly, no report can be made as to their advance of growth, as on the water in the pond being lowered they could not be seen, from their habit of burying themselves in the mud.

The Society having been applied to by Miss Burdett Coutts, concerning the possibility and best method of curing pilchards by the poor fishermen on the south coast of Ireland, the Secretary succeeded in obtaining the required information

(through the kindness of Mr. R. W. Fox, of Falmouth), to the entire satisfaction of Miss BURDETT COUTTS.

The Council have much pleasure in informing the members that the medal kindly promised by Miss BURDETT COUTTS is in the hands of Mr. G. G. ADAMS, the artist appointed by her, who has arranged the design and presented the sketch model to the Annual Meeting on the 14th May, which was generally approved of, and the thanks of the Society to Miss BURDETT COUTTS unanimously expressed by the whole meeting.

The Society during the past year have continued their efforts to introduce and propagate such examples of Game Birds as experienced sportsmen considered desirable to add to the established favourites of our preserves. Of the Prairie Grouse they obtained seven healthy birds, of which her Majesty the QUEEN was graciously pleased to accept one pair, which continued to prosper for several months and became so familiarised to climate and circumstances as to come daily with the pheasants to be fed at the keepers' lodge, most satisfactorily proving that so far as climate is concerned there would be no difficulty in acclimatising these birds. They were killed by foxes, together with a large number of pheasants, in the neighbourhood of Bagshot, towards the end of the year 1865.

Earl POMFRET received a second pair in charge from the Society. The other females were killed by accident, without the slightest appearance of disease induced by change of climate. The Versicolor Pheasants in possession of the Society have prospered, and allowed the Council to distribute a considerable quantity of eggs to its members, of a cross between that bird and the common pheasant

The Purple-backed Kaleege offers the hopeful probability of domestication, having been sitting on a nest of eggs for several days with an assiduity almost equal to that of the hen of our common poultry.

The Californian Quails have proved themselves strong and hardy, and have laid a large number of eggs that have been

distributed by ballot to the Members, who made application for them.

The Plumifer Quails, from the Rocky Mountains, died from accidental injury, but appeared to offer, while living, every probability of success, had there been a greater number of specimens obtained.

An interesting cross between the Indian Bantam and the Gallus Sonneratii has proved to be very prolific, and enabled the Council to distribute a large number of their eggs to the Members of the Society.

The kind promises of Sir Rutherford Alcock, Mr. W. Medhurst, Captain Malcolm, and other friendly promoters of the objects of the Society, justify the Council's hopes that they will speedily receive their first consignment of Reeves's, and other Chinese Pheasants.

From our Honorary Corresponding Members at Guernsey we have the interesting report that the pair of Curassows, so long under the anxious care of Monsieur Carré, laid two eggs in the month of July last. The hen took possession of a deserted fowl's nest, among some ivy on the top of a wall without improving it in any way. The eggs were large—$3\frac{5}{8}$in. long, and $2\frac{3}{4}$ in the shorter diameter—and weighed upwards of half-a-pound avoirdupois. After waiting eight or nine days it was found that the bird neither continued to lay, nor shewed any disposition to sit. The eggs were placed under a fowl that had commenced sitting only a few days; which after some weeks' incubation, were found to be addled.

The Curassows have now been in the possession of Monsieur Carre two years and a half, and have continued during that time in excellent health and condition; they seem, therefore, quite capable of enduring the climate of Guernsey; and the fact of their not having been more successful with reference to breeding can only be attributed to the accidental ill-assortment of the pair—the female being very old, and the male bird peculiarly vicious, subject to periodical mad fits, when he is really dan-

gerous, rendering it absolutely necessary for the poor creature to be shut up in solitary confinement for many weeks together. But two or three well assorted pairs of these birds of splendid plumage might establish the success of acclimatising this valuable addition to our poultry yards.

The Council have also received information in a letter from the Secretary of the Brisbane Acclimatisation Society, that, during his recent visit to Sydney, he saw a pair of these beautiful birds in the Gardens of the Acclimatisation Society of New South Wales, in admirable health and plumage, perfectly prosperous, and apparently indifferent to the fact that the thermometer indicated 95° in the shade.

The Talegallas in possession of the Society are three healthy birds. They occupy themselves with making the usual mounds, but without any sign that there is a variety of sex among them.

The Emus continue in perfect health, and may be said to be very hardy, and thoroughly acclimatised, so as to render them capable of being kept in any park in England or Scotland, dry cold, snow and frost appearing to have no effect upon them.

The Guans continue very hardy and tame, and pass their healthy but unprofitable life without breeding.

Among the group of Wonga Pigeons at Clapham two have paired, the result of which has been one egg, followed by various indefinite attempts at making a nest, but without any further results. We hear, from a member having some Wonga Pigeons in Scotland, that, though some have died, the survivors appear quite hardy, the climate appearing to have no effect upon them.

The Bronze Winged Pigeons at the Society's Depôt at Clapham have all nested, but up to the present time only one living bird has been reared. The pair of these birds in charge of Dr. Bull, at Hereford, have reared two healthy young birds this season.

Mr. Bush has retained examples of a cross between the original Chinese sheep imported by the Society, and Oxford

downs. The present examples may be said to be three-fourths Chinese. Their prolific character continues—always twins at least, and sometimes three at a birth. The flesh of one recently slaughtered proved excellent eating, being good both in flavour and texture of fibre.

The pair of Sambur Deer, presented to the Society by Her Majesty the QUEEN, and transferred by them to one of their Vice-presidents, His Grace the Duke of MARLBOROUGH, have both died from the same kind of inflammation that has been a great scourge to many deer-parks this winter.

The Kangaroos that were at Clapham have been received by His Grace The Duke of MARLBOROUGH.

Viscount POWERSCOURT's breed of Wapiti Deer are all about three years old, perfectly hardy, but have not yet commenced breeding. His Japanese Deer are flourishing, and have bred three times. The group of Sambur Deer which his Lordship possessed, have all died off at short intervals, one after another.

The following Members have received by ballot eggs of Versicolor Pheasants, Quails, and Indian Bantams:—

VISCOUNT HILL.
W. H. POLE CAREW.
ADMIRAL SIR G. N. BROKE MIDDLETON, BART.
LORD ABINGER.
CAPT. DAWSON DAMER.
The DUKE OF MARLBOROUGH.
TYRWHIT WALKER.
LORD KINNAIRD.
The DUKE OF ST. ALBANS.
EDWARD BROWNE.
J. CHARLTON PARR.
B. G. DAVIS COOKE.
THOMAS CHAMBERLAYNE.
LORD WALSINGHAM.
LORD VERNON.
DR. BULL.
W. L. MERRY.
T. V. MORGAN.
LADY MILDRED BERESFORD HOPE.
S. W. SILVER.
HENRY EARLY.

The following Members, having applied for fish ova, have received either ova or fry of Salmon, Trout, and Char :—

The Duke of Argyll.
W. R. Baker.
F. Chadwick.
Sir John D'Oyley, Bart.
J. B. B. Elliott.
Charles Hambro.
M. D. Hollins.
J. G. Hubbard, M.P.
M. Kingsford.
Lewis Majendie.
Mr. W. Moult, for the Earl of Derby.
Lt.-Col. Napier Sturt, M.P.
Rev. W. Smythe.
Rev. J. C. Thring.
R. D. Skrine.
Lord Vernon.
T. Worthington.

The following Members have also received by ballot, seeds, roots, or Silkworm eggs :—

The Duke of St. Albans.
B. G. Davies Cooke.
Lewis A. Majendie.
The Bishop of Oxford.
W. H. Pole Carew.
Edward Browne.
Hy. Early.
W. L. Merry.
Lord Walsingham.
S. W. Silver.
Dr. Bull.
J. H. L. Anstruther.
Jackson Gillbanks.
Admiral Sir G. N. Broke Middleton, Bart.
W. C. Morland.
Lord Kinnaird.
A. W. Crichton.
Sir Wm. Heathcote, Bart, M.P.
Mrs. Sotheby.
Lady Dorothy Nevill.
J. J. Stone.
The Viscount Gage.
John Harvey.

Rev. C. J. Thring.
Lady Mildred Beresford Hope.
Charles Penruddock.
Lt.-Col. Napier Sturt, M.P.

Last year the Society received a limited supply of the eggs of Bombyx Yama-Maï from France; these were, in part, distributed to various members of the Society, and the residue were retained by Mr. Bush, at Clapham, where a large number were hatched, but they invariably died after the second casting of the skin. The number was thus reduced to about 40, which grew to the size of about 2½ inches, having fed readily and by preference on the common British oak. When they had attained this size they appeared to be attacked by some disease, which caused a sudden discharge of the fluids in the body, and the consequent withering and death of this very beautiful caterpillar. They were of a brilliant green, with small silvery spots on the side.

The whole of the number that had reached this size died in this manner, not leaving one to attain the power of spinning; but with our Honorary Members at Guernsey, to whom a portion of the eggs had been consigned, the experiment was carried further towards a successful issue, as described in the following brief report by the Rev. W. T. Collings, who so indefatigably conducted this experiment to the end. He says—

"From the eggs supplied us by Dr. Hoskins, about 60 worms "were hatched in April last. We tried them with every kind of "leaf, common or exotic, we could think of. At least 100 "sorts were refused by the worms, who, to our despair, would "only feed upon each other. This species of cannibalism, how-"ever, disappeared after the first change of skin. They then "began to eat the young leaves of the Turkey oak, and, "during their last stages, condescended to feed upon the leaf "of the common English oak. Only 17 worms ultimately re-"mained to us. They were very large and handsome cater-"pillars of a lovely green colour, with spots of bright silver

" arranged in rows, one along either side. These creatures were " much more active than the common silkworm, walking rapidly, " highly irritable when touched; and if disturbed whilst spinning, " as was sometimes necessary, in order to place them more " securely, they would cease to spin for hours together. The " silk produced is exceedingly fine, of a pretty light green tint, " similar to that of the worms, but so easily broken as to be " difficult to wind off. Seventeen moths were developed from " the seventeen cocoons, but they did not deposit any eggs."

This year the Society were so fortunate as to receive from the Imperial Society of Acclimatisation of France, many thousands of the eggs of this interesting silkworm — Bombyx Yama-Maï—which, having arrived long before there was a possibility of obtaining food for them, were kept from any degree of warmth which might induce their hatching out prematurely. Early in the month of April Mr. Edward Wilson, one of our Vice-presidents, kindly transferred to us a large parcel containing many thousands of the eggs of this silkworm, which were intended by the Imperial Society of France for presentation to the Acclimatisation Society of Melbourne; but, arriving too late for the vessel well stocked with ice for conveying them to Melbourne, Mr. Wilson considered that the next best thing to be done was to present them to this Society. By the assistance of one of our members, H. J. B. Hancock, Esq., we have obtained 100 Oaklings, now in full leaf, upon which the eggs are placed in a warm and sheltered situation, with an endeavour to maintain an equal temperature. We are not yet able to report, with any degree of confidence, the results, there not being sufficient time to take an average of the deaths.

We have also a parcel of many thousands of the Japanese Mulberry-leaf-eating Silkworm, great numbers of which have hatched out, and present reasonable hopes of an ultimate success.

When the Society accepted their position at South Kensington they undertook the exhibition of such living things as the

Council of the Royal Horticultural Society thought admissible to their Gardens; among these were various sorts of Silkworms, as the Bombyx Cynthia, Bombyx Yama-Maï, and the Japanese Mulberry Silkworm; also the best modes of Bee keeping, with a view to popularize this useful pursuit for cottagers, gardeners and others. The Society have been assisted by Messrs. Neighbour and Sons, of Regent-street and Holborn, in providing the newest patterns of hive, particularly hives calculated to preserve the bees alive during the process of taking their honey, so as to render quite unnecessary the cruel practice of destroying them for that purpose. They have also had, last season, and have at present, a set of glass hives, so contrived that the operations of the bees may be studied and seen distinctly while they are working. The Society have swarms of the Ligurian Bee, Apis Ligustica; they have also obtained from Mr. Woodbury, in Exeter, a colony of the Egyptian and Syrian Bee, which are also visible to the spectator through the medium of glass panels to the hives. They propose to extend the interest of this Exhibition, by introducing the large Swiss hives, also the Cork hive, well known in Portugal. These collections have been visited by many thousand spectators during the year, and the Society have every reason to hope that the number of bee masters have increased, and that the simple means of obtaining the luxury of honey by the humble cottager may be converted to his profit and advantage, without the barbarous system of destroying the original stocks of these industrious contributors, which may be entirely superseded by the simple and inexpensive plans now offered the public.

The Society intend to ask permission to have stocks of the most useful sorts of Bees placed in connexion with some of the Lodges in the Parks, showing simple modes of bee keeping and of taking the honey without destroying the bees.

The Council have received, and distributed by ballot among the Members, seeds of the Dwarf Bamboo, the Tallow Tree obtained from China, roots of the Arundo Donax, seeds of

Evergreen Oak and Cork Tree, two species of Cypress from Portugal, and have also exhibited at the International Horticultural Exhibition tubers, plants, and products of London grown Arrowroot. It is found that excellent Arrowroot can be produced from the tubers so grown, equalling the best Brazilian Arrowroot; and the Council hope that, by cultivating these tubers on a much larger scale, as they grow so readily, a supply of good Arrowroot might be obtained at a greatly reduced price, which could not fail to be a great benefit to the poorer classes in the event of cholera, or similar epidemics, again visiting this country.

The Council have to return thanks, on behalf of the Society, to those whose names are mentioned below for assistance rendered to the Society during the past year.

IMPERIAL ACCLIMATISATION SOCIETY OF FRANCE, for Bombyx Yama-maï.

MRS. W. SMITH, of Norfolk, for eggs of Japanese Mulberry Silkworms direct from Japan.

EDWARD WILSON, ESQ., V.P., for the transfer of a large parcel of Bombyx Yama-maï, cocoons of Ailanthus Silkworms, and eggs of Japanese Silkworms, received by him for the Acclimatisation Society in Australia, but, arriving too late, he presented them to this Society, who have distributed them amongst their Members.

REV. C. L. EAGLES, for his exertions in obtaining and presenting several thousand Trout ova to the Society.

THE ANGLING ASSOCIATION AT WINDERMERE, as represented by CAPTAIN T. ELMS, for obtaining Char ova for the Society.

J. W. MALCOLM, ESQ., M.P., for his kind exertions in aid of the objects of the Society during his absence abroad.

H. J. B. HANCOCK, ESQ., for 100 Seedling Oaks food for Bombyx Yama-maï

REGINALD JAMES, ESQ., for kind assistance to obtain the Gelinotte.

H. J. WOODBURY, ESQ., for presentation of Eggs of the leaf insect Phyllium, and others.

JOHN COLEBROOK, ESQ., for presentation of a large parcel of the seeds of the Tallow Tree, from Shanghai.

R. W. FOX, ESQ., for information concerning Pilchards.

B. WATERHOUSE HAWKINS,
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ACCLIMATISATION SOCIETY OF GREAT BRITAIN.

Balance Sheet for the Year ending April 30th, 1866.

RECEIPTS.

	£	s.	d.
Balance in hand from 1865 ... ... 626 4 8			
„ with Clerk „ 2 15 6			
	629	0	2
To Sale of Cattle	36	10	0
Donations and Subscriptions	318	16	0
	£984	6	2

EXPENDITURE.

	£	s.	d.
By Printing, Stationery, Postages, &c., &c.	109	10	5
„ Expenses of Animals, Food, Fees, Cages, &c., &c.	175	7	0
„ do. of Fish Culture	146	14	8
„ Salaries	263	16	0
„ Rent of Offices, &c.	86	0	0
„ Housekeeper's Expenses, Coals, Gas, and Incidentals	24	1	9
By Balance at Bankers ... 175 2 8			
„ Ditto with Clerk ... 3 13 8			
	178	16	4
	£984	6	2

We certify that the above Balance Sheet is correct,

JAMES A. YOUL,
HENRY HANCOCK, } *Auditors.*

12th May, 1866.

ATTENDANCES OF MEMBERS OF COUNCIL FOR THE YEAR ENDING MAY, 1866.

Oxford, Lord Bishop of	0
Tredegar, Lord	2
Scott, Sir Claude E., Bar.	3
Arden, A. E.	8
Crichton, A. W.	8
Gillbanks, Jackson	0
Hawkins, B. W.	15
Morgan, W. V.	8
Stone, John J	3
Bush, John	14
Buckland, Frank	8
Hancock, H. J. B.	6

APPENDIX.—B.

The following is a copy of a document, forwarded through the Foreign and Colonial Offices, to Her Majesty's Ministers, Governors, and Consuls abroad:—

ACCLIMATISATION.

INQUIRIES *addressed to Her Majesty's Minister, Governor, or Consul at* _____

The gentlemen to whom these questions are addressed, are earnestly requested to consider the high importance which will be attached to the answers which they may return, and the service which they will render to the cause of *Acclimatisation* by endeavouring, to the utmost of their knowledge, to make those answers as full and otherwise as satisfactory as possible.

The main purposes of *Acclimatisation* are to introduce, acclimatise, and propagate in the *United Kingdom* and its *Dependencies* such *Animals, Birds, Fishes, Insects,* and *Vegetables* as are likely to be of *use* or *ornament,* whether for *domestication* or *for varying the common food of the people,* or for *manufacturing,* or for *any other useful purpose;* and whose constitution and habits offer a reasonable prospect of successful cultivation. It is obvious that in *India, Australia, Canada,* the *Cape,* and other important *Dependencies,* unlimited scope is afforded for almost any variety of experiment.

It is confidently expected that the answers returned to these questions by *Her Majesty's Ministers, Governors,* and *Consuls* in different parts of the *world,* will bring together a *mass of information* on this interesting and highly important branch of knowledge such as never has been collected before, and the benefit which these gentlemen will thus confer upon their fellow-countrymen will be in proportion to the fullness and exactness with which those answers are drawn up.

In replying to questions 1, 2, 3, and 8, it is particularly requested that those special qualities which recommend the *Quadrupeds, Birds, Fishes, and Vegetables* as fit for food or domestic utility may be described. As regards *Quadrupeds,*

Birds, and *Fishes*, it will be very desirable to collect all the *information* which can be got as to the best modes of *feeding*, *keeping*, and *rearing* the same; and, as regards *Vegetables*, any information as to the best mode of *Cultivation*.

A copy of the last *Annual Report* of the *Acclimatisation Society* of *Great Britain* accompanies this, and will serve to explain more completely the action and purposes of the Society.

QUESTIONS.

1. Is there any *Quadruped*, indigenous or introduced to the *Country* in which you reside, which (having regard to the above definition of the objects in view) merits attention with a view to *acclimatisation* in *Great Britain* or any of its Dependencies? If there be any such, state whether it is attainable at a reasonable rate, and whether it is likely to bear the risk of transport?
2. Is there any such *Bird?*
3. Is there any such *Fish?*
4. Is there any such *Insect?*
5. Is there any such *Timber Tree?*
6. Is there any such *Medicinal Plant?*
7. Is there any *Fibrous Plant* likely to be useful for manufacturing purposes?
8. Is there any *Vegetable suitable for the food of man*, or for forage, or for any other useful purpose?
9. Do you know any (*a*) *Quadruped*, (*b*) *Bird*, (*c*) *Fish*, (*d*) *Insect*, (*e*) *Tree or Plant* existing elsewhere, the introduction of which to THE COUNTRY IN WHICH YOU RESIDE would be likely to be beneficial; one of the objects of the *Acclimatisation Society* being to reciprocate the benefits which it receives from other countries?
10. Does any *Organisation* exist, or could it be easily called into existence, capable of undertaking the task of introduction?

Any *Remarks* founded upon special knowledge or local information, capable of being made useful to the progress of *Acclimatisation* will be desirable.

ANSWERS TO THE FOREGOING INQUIRIES.

*** *In nearly every instance answers have been received to* ALL *the questions forwarded, but, for obvious reasons, only those answers which are in the affirmative, and which convey information likely to be useful, are given in the following List. The* figures *correspond with the numbers of the Questions to which they refer. The Council of the Acclimatisation Society do not hold themselves responsible for the rendering of local names.*

ALEPPO (SYRIA).

1. Large-tailed Syrian sheep, and a very tall breed of cows.
2. Fine pigeons, red-legged partridges, francolins, and bustards.
6. Wild quince.
8. The egg plant, vegetable marrow (*Cucurbita ovifera*), melon, watermelon, &c., sainfoin.
9. *(b)* Poultry, *(c)* South Sea Island cotton seed.

ALGIERS.

5. *Thuja articulata* (arbor vitæ).
7. The diss and the alfa.
8. The sweet acorn.
10. A Garden of Acclimatisation established, and is now flourishing.

ALICANTE (Spain).

1. Large jackass.
2. Large black cocks and hens.
4. Common silk-worm.
7. Common varieties of hemp and flax, aloe, esparto or feathergrass (*Stipa* of Linnæus).
8. Mani, or cacahuete (American earth-nut, or pindars) (*Arachys hipogæa*, Lin.)
9. (*a*) Horses, bulls, cows, sheep, and pigs from England.

AMSTERDAM.—Nil, other than frogs and toads, of which large numbers are exported for the use of gardeners, to consume slugs and snails.

ANCONA (Italy).—Nil.

ANTIGUA (West Indies).

2. Geese, turkeys, guinea birds, ducks, owls, hawks, and kites; Migratory Birds—Quails, ground doves, plovers, and sandpipers; humming-birds, and other species of Pici.
3. Turtle, king-fish, baracouta, grouper, snapper, lobsters, shrimps, marine crab, and the *Cancer ruricola*, or land-crab, oysters (*Ostrea parasitica*).
5. Red and white cedars (*Cupressus thyoides*), mahogany, logwood, manchimal mangrove, olive bark tree (*Bucida buceras*), broad-leaved terminalia, or wild almond tree, and the tamarind.
6. Castor oil plant (*Palma Christi*), *Quassia excelsa*, lemon grass (*Andropogon schœnanthus*) and the Citron tribe.
7. The snake grass (*Sanseviera spicata*), American aloe (*Agave Americana*), and several plants belonging to the Sedge tribe (*Cyperaceæ*).
8. Sweet potato (*Convolvulus batatas*), yam (*Dioscorea alata* and *sativa*), eddoe (*Caladium esculentum*) okro (*Hibiscus esculentus*), different species of squash (*Cucurbita melopepo*, *&c.*), mountain cabbage (*Areca oleracea*), plantains and bananas (*Musas*), tou-le-mois, arrow root, India and Guinea corn; for Forage—Guinea grass, and a grass called cent.-per-cent. (*Punicum colonum*).
9. (*a*) Good sheep and oxen.

APIA UPOLU (Navigator Islands).

1. Vespectilis, Mus Gliris.
2. Manu-mia (*Didunculus strigirostra*), a species of Ptilinopus; a species of Carpophaga; *Tachypetes aquila*, a species of Sula.
3. Inagna Pulolo.
4. Tavau (in the class Vermes).
5. Mumala, wild nutmeg.
6. Many.
7. A great variety, including Fau togora, Fau pata, Lau tutugna, Fua fua, Mati-aule-ulu, and many others.
8. Bread-fruit (*Artocarpus*), yam (*Dioscorea*), taro arum, ti cordylini, ginger, arrow root, vi eira dulcis, Cayenne pepper, fan palm-tree, ferns (the roots of some are edible), the mountain plantain.
9. Plants and animals.

ARCHANGEL.

3. Sterlet (*Accipenser ruthenis*).

AUSTRALIA (Victoria).—See Appendix C.

AUSTRALIA, SOUTH.

1. Kangaroo, wombat, wallaby, opossum, and uroo.
2. Magpie, lipore, or native pheasant, bronze-winged pigeon, the native turkey, or more properly bustard, curlew, a large variety of fine ducks, especially the mountain or red-breasted duck, New Holland goose, Muscovy goose, quail, teal, crested pigeon,

speckled dove, emu, black swan, nankin, laughing jolkas, diamond sparrow, parrots, parroquets, and cockatoos.

3. Murray cod, mullawa, bream mullet, a fresh water lobster, gundallah, or butter-fish, a small fish of the salmon family, a small kind of trout, a large kind of perch, the calubko, and pulyee.
4. One kind of spider, which spins a yellow kind of silk.
5. The white gum (*Eucalyptus roshata*), red gum, myall, eucalypti, blackwood, varieties of the mattee, hakias, grevillias, kalosstemnon, and vimenera.
6. Grass tree (*Xanthorrhœa arborea and Australis*), red gum tree, the sarsaparilla of the colonists (*Polygonum*), drosira (*Egalieum rosulata*), drosira (*Egalieum sulphurea*), and gum wattle (*Acacia pycnantha*).
7. A sort of grass, fit for making ropes, &c., the common Cape aloe, a species of flag, and the native flax.
8. A sort of grass, *Ceratoshlon Australis*, nardoo, saltbush, alsafa, wattle, peach, currant, several grasses, poa, stirpus, and stipa, a small description of cucumber, and the native pear.
9. (*a*) The Angora goat, two species of the South African antelope, the eland, and the oryx (*Oryx Capensis*, Harris), the Cashmere goat, several kinds of antelopes, the llama, the alpaca, the foreign long-woolled sheep, the hare, and the red and fallow deer. (*b*) the European pheasant, partridge, and woodcock; the secretary bird from the Cape of Good Hope, the crowned pigeon from New Guinea, the ostrich, the skylark, thrush, sparrow, and many of the hardier insect-eating birds. (*c*) The salmon, the English oyster, salmon trout, plaice, and sole. (*d*) Several of the Asiatic silkworms, especially those of China; the eggs of the *Bombyx* into Java; the Argan tree (*Arganica Sideroxylan*), the *Oxalis mori*, and the *Bombyx Cynthia*. (*e*) The Chinchona, lately introduced *crenata*, the Para grass (*Panicum tumentorum*), the Alsafa grass from New Mexico, the arrowroot from Bermuda, the tous-les-mois from Trinidad, and the granadilla (fruit) from Natal. The clear bright sunny climate of South Australia should promise well for the cultivation of plants producing colour, as madder, saffron, &c. &c.
10. The Botanic Garden of the Province and the Adelaide Philosophical Society.

BAGHDAD (Turkish Arabia).

9. Many, probably, and especially *(e)* Vegetables.

BAHIA.

1. Mule, tapir, or anta, paca, capivara, raton verdancico, coati, peccary, contia, and different species of deer.
2. Brazilian ostrich (*Emu*), seriema, toucans, jacu, and a variety of wild ducks, pigeons, partridges, and parrots; the blue and red arara, black swan, catinga, soppet, tapatinga, are numerous.
3. Dourado (*Dolphin*), and surubim.
4. Bombici (*Bombyx aurata*), a species of bee that has no sting.
6. A species of belladonna, mastruce, medical aloe, and a few more known and in use in the Pharmacopœia.
7. Palm aloe, embiza, sipa, carua, &c., ticum palm, cotton tree, another of the palm species, *Attalia fumifera*, Caruanba palm (*Corypha cerifera*).
8. Capiva gordura, a species of bamboo, an endless variety of sweet potatoes, yams, aipim, mungara, inhamba, mundroea, arrowroot, Bahia inhams, or yam.

BARBADOS.

1. There is no quadruped which could be recommended for the purpose required. Those animals which are used for domestic purposes

are imported. The breeding of horses is not encouraged. Mules are not reared. It is rarely that one meets with a colt. The breeding of asses would be attended with great benefit, the land being most suitable, but they are so hard worked, that there is little opportunity for their increasing. Little attention, too, is paid to the breeding of cattle, most of which are kept for the purpose of the milk, and the calves are sold to the butchers. Besides the above cause, the present race is of a diminutive size, which depreciates its value; by far the most part of those used for working purposes, and those that are slaughtered, are in consequence imported. Sheep and goats are reared, but are not improved upon, as the skin of the first is as smooth as that of the second. The hog breeds very quickly, but the offspring is sold before they attain to full growth. There are some exceptions, as some persons take delight in the breeding of all sorts of cattle, &c., and produce very fair specimens. The only indigenous quadruped which we still meet with (although very seldom) is the racoon (*Procyon lator*), which, on account of its uselessness, need not be noticed any further. The supposed existence of the monkey on this island must be viewed as merely historical.

2. This question can, like the foregoing, be replied to in the negative. This is to be expected when we consider that the whole island is under cultivation, thus leaving no forest for establishing many kinds of the feathered tribe. The only bird which could be taken into consideration is the black bird, on account of its beautiful black feathers and voice, as well as its usefulness in destroying the insects and vermin which are so destructive to cultivation. Its natural habits being hardy, it can endure the chance of transportation, and although it feeds, as stated, on insects, &c., it can also be fed on roots and seeds. The black bird, which we speak of, is the *Quisculus crosocrostris*, and not the *Merula vulgaris*. Some have been transported to Melbourne, but the species is not known. The above remarks relate merely to indigenous birds. With regard to domestic birds, there is a plentiful supply of poultry.
3. Although the sea which surrounds this island abounds in a great variety of fishes, they are still not transportable. We must turn our attention to the fresh-water fish. Of these there are three sorts which deserve remark, with a view to acclimatisation, viz.:— Snook (*Centropomus undecimalis*), mullet (*Mugil albula*), and caffum (*Megalops atlanticus*). The snook, although belonging to the same genus as the pike (*Esox lucens*), differs in species. The species of the mullet differs from that of the *Mugil capito* (grey mullet). Both the pike and grey mullet are well known in Europe. The snook, mullet, and caffum frequent the salt as well as fresh water, and are to be found in abundance in the rivers. They can be propagated with success in ponds. The snook improves in size very rapidly, and are met weighing from 25 to 30 pounds. The caffum attains to a length of three feet, and weight of 15 lbs. The mullet is a smaller kind of fish. These, when fresh, are wholesome food, and increase rapidly. They are easily obtained, and at little cost. The safest mode of transporting them is in a wooden trough, filled with fresh water, and with a thick layer of clay or sand at the bottom. The water should be changed as often as practicable. Their food should consist of the refuse of fresh flesh and poultry, free from blood, small fish, yolks of hard-boiled eggs, bread or biscuit-crumbs, and fresh or cooked vegetables. On reaching their destination, they should be put into ponds fit for their reception, where food is easily attainable. They breed of themselves, but, to promote their increase, the pisciculture system which is now in use should be re-

sorted to. Should there be any obstacles in the way of the above mode of transport, fecundated ova of these fishes might be hatched artificially.

4. There are no insects in this island that need any particular notice. Although *Crustacea* do not belong to the class of insects, it may be mentioned that the rock-lobster and sea crawfish, very large and good-flavoured, exist here. They can be recommended for the purposes of acclimatisation, if not in the United Kingdom, in its dependencies, in most of which they are to be found. It seems that the introduction into Melbourne of the European lobster has failed, but the trial of some from other directions might be attended with success.
5. No woods exist here, consequently very few timber trees are to be found; the indigenous locust (*Hymenæa combaril*), and bally tree (*Baincha nigra*), are rarely to be met with. The mahogany *Swietenia mahogoni*), however, which was introduced here, is planted very generally, but these trees are so well known that their transportation is unnecessary.
6. None in addition to those which have been already analysed and recorded, although be it said in praise of the inhabitants, that every one takes delight in cultivating flowers and other plants for their comfort.
7. There are many kinds, the chief of which are the maypole (*Agave Americana*), Spanish needle (*Yucca deaconis*), ochna (*Hibiscus esculenta*). These plants have been treated on by writers, and have no doubt been introduced into many places. There is no need, therefore, to give any idea of their cultivation, beyond stating that the two first are produced from suckers and are hardy, whilst the last grows from the seed.
8. The most useful plants are already introduced into other countries, but as no labour has been spared in introducing into Europe the Chinese yam (*Discorea batatas*), the hook-podded pea (*Dolichos unguiculatus*), and the Lima bean (*Phareolis limensis*), why not give a trial to the causse yam (*Discorea alata*), the tanyer and eddoe (*Arum esculenta*), the increase peas (*Dolichos sesquipedalis*), and the buana vesta (*Lablab vulgaris*), all of this place, and which require the same treatment as the first-named plants. There is also here a tribe of pea, which is easily cultivated, of good flavour and wholesome, *i.e.* the pigeon pea (*Cajanus indicus*) and which is worth making a trial of.
9. (*a*) There is no scope in this place for such introduction. This must be left to the energy of those who feel an interest in rearing stock, and who no doubt have the means of carrying it into execution. (*d*) Of the few that would be of general use the introduction of the cochineal insects might be beneficial as not having yet been tried. (*e*) The Cactus is known throughout the island, and in great variety, particularly the *Cactus opuntia*, a plant which grows here in great abundance.
10. The General Agricultural Society, which endeavours to promote industry in the island, could be applied to, as being capable of undertaking the task for forming a committee of its members to carry it into execution.

BERDIANSK (Russia).

5. There are no trees except those lately planted.
9. None, as the climate would prove too severe to admit of the introduction of any of the above-mentioned quadrupeds, &c., and Russia is well supplied with every one of the animals suited to this climate.

BERMUDA.

5. Agave, Yucca, and *Juniperus virginiana*, or common red cedar.
6. The aloe (medicinal); almost any other might be grown here.
7. Fibrous plants, as well as most vegetables, grow here in perfection in certain respects, the fibre being as a general rule much more delicate than that found in most places.
8. Arrowroot and Irish potatoes.
9 (*e*) *Quercus vivans*, or live oak of America; the various species of the Agave plant, the *Agave sisilina*, the date and cocoa tree; (*c*) the oyster.

REMARKS.—The climate may be made the medium by which animals and vegetables may be introduced from a higher to a lower degree of temperature and *vice versa*.

BILBAO.

9. (*a*) The alpaca might be introduced with advantage in the north of Spain.

BORDEAUX.

10. The project of a local organisation has been abandoned, and the Acclimatisation Society of Paris have renounced the idea of founding a branch here, in consequence of the absence of all interest in the natural productions of the district, and the unfavourable conditions of the climate, which is exposed to too sudden alternations of heat and cold.

BOSNA SERAI.

6. There is a kind of Pyrethrum, which grows in the Herzegovina and Dalmatia, of which large quantities are dried and exported to Europe. The flowers, leaves, and stalks are dried and ground to powder, and in this shape the plant is used to destroy bugs, fleas, and other similar vermin, and is most efficacious.
9. Most of those found in England are produced here.

CAGLIARI (IN THE ISLAND OF SARDINIA).

1. Moufflon.
5. Oak (*Ilex* and *Rubia*) and the yew. The *suber*, or cork tree (*Quercus phellos*) abounds, but is seldom used as timber.
7. Common flax plant (*Linum*).

CALLAO (PERU).

1. Anchenia, llama, alpaca, and vicuna.
6. Matico, mishica mishica, centella, and guaco aguodo.
7. Pucapanya, the leaves of which are a scarlet dye; a Cactus, which bears a kind of wool, which might be substituted for cotton; Cactus abounds.
8. Yellow potato, the chauca or blue potatoe, the oca, mashua, ulluca, anachaca, and quinoa (*Chenopodium quinoa*).

CANTON (CHINA).

2. A species of thrush called stiva-praih, and a lark.
5. Camphor tree.
7. A species of flax, which is bleached and made up into a manufacture called "grass cloth," The cotton of China is well known, but that is not a fibrous plant.
8. The sweet potatoe.

CARTHAGENA (SPAIN).

3. Very inferior; not worthy of notice.
7. Only the well known Esparte.
8. None that are not already known in England.

CHERBOURG.—Nil.

CHINA.

1. There is a very prolific race of sheep in the north, and there is also the yak, both of which have engaged the attention of foreigners. Some yaks were taken to France a few years ago by M. Montigny.
2. Possibly some of the fine Chinese pheasants, if not too delicate in constitution, might be worth trying. There is also the sand grouse in extraordinary abundance near Peking. This bird occasionally visits the British islands, and might no doubt be introduced; the flesh is much esteemed. The singing birds are of too tropical a type to be likely to succeed.
4. There is the larva of a bombyx (*B. cynthia*), feeding on the Ailanthus, which is attracting attention in Europe, and possibly others may be found the cocoons of which furnish a strong though coarse silk.
5. No doubt numbers in the north, whence Fortune, Veitch, and others have already introduced a great many. The more northern bamboos would doubtless succeed in, for instance, the south-west of Ireland, without any protection, as they abound at Ningpo.
6. Doubtful. China medicine is quite *sui generis*, and their *materia medica* very peculiar. They depend greatly upon herbs, and make use of almost all the common indigenous plants, to which we should certainly refuse the virtues they ascribe to them.
7. Jute (*Corchorus capsularis*) and grass cloth (*Boehmeria nivea*) are commonly grown here in the south. The latter abounds on the walls of Canton.
9. Doubtful. The introduction of our best varieties of fruits and vegetables would certainly be a great boon, and in time supplant those now in use.

CHRISTIANA.

2. The hazelhen (*Gellinous*), which is the most esteemed and delicate bird in Scandinavia, on account of its delicate game flavour, and peculiar plumpness of flesh, compared to its size and to other birds; the flesh is white, like that of the pheasant. During the summer it seeks the birch woods and heather; as soon as the birch leaves are fallen it takes to the more densely-wooded fir forests, principally, as a shelter against its great enemy the hawk. In the summer its food consists of heather, which appears to be the favourite food, conjointly with berries, such as the blueberry, whortleberry, cranberry, &c.; likewise, when on the ground with their brood, they devour insects and larvæ. In winter, when the favourite food, that of heather, is not to be had, the red berry of the mountain ash, birch buds, juniper berries, and fir cones, constitutes the chief food. I do not apprehend that there would be great difficulty in acclimatising this bird, or in transporting them, as they are readily tamed and familiarised with a cage and with those who feed them. Heather and juniper berries should be their first food; they soon, however, become reconciled to hemp seed, corn, buck-wheat, and other seeds, which after a time they devour with avidity. For the first few days after the bird is caged, the berries should be put in a flat dish with water, with a view to teach the bird to drink. Like domestic fowls in a tame state it soon learns to eat boiled and raw meat likewise. Plenty of sand should be in the cage, otherwise he will soon pine away, as he delights in daily rolling in and throwing the sand over his back and head.

8. Multeberry, or cloudberry (*Rubus chazincemorus*) grows wild all over the country in marshy or peaty soil, but more especially in Finmark and north of Norway; it is found in great abundance, and forms an article of export to the south, where it enters largely into the domestic economy of the inhabitants, not only as an admirable substitute for vegetables at a time when they are scarce, but especially on account of the inherent antiscorbutic qualities the berry contains. I have no doubt but that this plant can be readily acclimatised in our marshy valleys, in the mountain districts in Wales, Scotland, as well as north of England, probably likewise in Ireland, where peat is so abundant. They are propagated direct by transplanting, or by seed, perhaps more readily by the latter. When once acclimatised they rapidly propagate themselves.

COQUIMBO.

1. A species of deer, and the Guanaco.
6. Many kinds of plants are used by the natives for medicinal purposes, but most of them are inert.
9. (*a*) The Cheviot and Leicester breeds of sheep have been imported from England, and an excellent cross-breed has been the result with the sheep of this country.
10. Private individuals have hitherto imported on their own account; no organisation could be easily called into existence for that purpose.

CORSICA.

1. The moufflon, or muffalo.
5. Larch (*Pinus larix*).
6. Corsican moss.
9. (*a*) Black-faced or Scotch heath sheep.
10. Agricultural societies have been established since 1853 in the five principal towns of the island.

DAMASCUS.

1. The gazelle—there are two species in Syria; the fat-tailed sheep; the Syrian donkey, of which there are two species, viz., the large black or dark brown, which is useful as a sumpter animal, and the white, which is a graceful creature for ladies or children to ride; the mule, which is a cross between the large donkey and the Arab horse; the Arab horse, which is well known.
2. The francolin, a species of pheasant; a rich variety of hawks; the golden oriole (beautiful plumage); the blue bee-catcher (ditto).
4. A great variety of beetles of every shade of colour, as well as butterflies and moths.
5. The Persian poplar, varieties of evergreen oak, the pistacio tree, and the olive tree.
6. Scammony, colocynth, *Palma Christi* (or castor oil plant), henbane, mandrake, squill, storax, "Shirsh el Halamy," which is used for washing delicate articles which will not bear the the action of soap.
7. Reeds, which are manufactured into mats and baskets.
8. A variety of pumpkins, vegetable marrows, and a species of cucumber, a plant called "bamie;" several kinds of egg plant, sessame seed, olives, dates, apricots, and plums; small peas, resembling lentils.
9. (*a*) The English cart-horse, and wild rabbit; (*b*) pheasants; (*c*) salmon, trout, and oysters; (*e*) ash and mountain-ash, birch, beech, elm, and other trees; gooseberries, currants, the better kind of apples and pears, and yams.

DARDANELLES.

1. Camel and buffalo.

4. Silkworms are raised with success; the gall-wasp (*Cynips folii quercus*) also exists, but is exceedingly difficult to find; any attempt at its acclimatisation must be accompanied by the introduction of the *Quercus infectoria*.
5. Valonia oak (*Quercus ægilops*).
9. (*e*) The principal want of this part of Turkey at present is that of good varieties of cotton seed, particularly New Orleans. This has to a certain extent been introduced, but further supplies are required.

DUNKIRK.

4. The edible snail (*Helix pomatia*) is made use of as an article of food.
7. A species of brushwood grows upon the sandy downs close to the sea, known as arbonsia, which bears a white blossom resembling cotton; the fibre is very short, but the idea has been entertained that it might be used in the manufacture of paper; in the autumn it bears a small yellow berry.
8. Chicory is much used as a vegetable; there is also a marine plant, called "crête marine" (samphire) used as a salad and also pickled.
10. There is an Agricultural and Horticultural Society, but their attention is chiefly directed to the improvement of cattle and horses.

FIJI ISLANDS.

2. There is no useful bird indigenous to Fiji; the ornamental birds are few, and would be difficult to transport alive.
5. There are several valuable timber trees in Fiji, which have been described at length by Dr. Sieman; perhaps some of these might be introduced into the new colonies of Northern Australia.
6. Fiji is rich in medicinal plants used as such by the natives, but custom and prejudice prevent the natives from imparting to Europeans any knowledge of the plants possessing these virtues. The search for them would probably repay the investigations of a scientific man.
7. The fibrous plants of Fiji have also been described by Dr. Sieman. It would not appear, however, that any one of them would be of sufficient value to repay its introduction elsewhere.
8. The ordinary tropical vegetables, yams, taro, bananas, and plantains, described by Dr. Sieman; and one, the kairvai (*Dioscorea esculenta*, Lin.), is recommended for adoption in other tropical colonies by Dr. Sieman; and breadfruit, which might also perhaps be introduced with advantage into Northern Australia.
9. (*a*) Angora goat; (*d*) silkworms, which feed on the *Palma Christi*; the cocoa or (*e*) cacao tree.

The islands would suit most admirably the growth of long-haired goats. Cotton, sugar, and spices, with coffee and cocoa, will surely be produced here eventually, as in the Mauritius. The breadfruit tree might be exported from here to the northern colonies, now founding in Australia, easily.

FRANKFORT-ON-THE-MAINE.

3. Sander (*Lucioperca Sandra*), a fish of the perch family; the wels of Southern Germany (*Silurus glanis*).
9. English breeds of many domesticated animals seem to be superior to German.
10. Societies in Berlin and Frankfort-on-the-Maine.

GALVESTON.

2. The trumpeter swan *(Cygnus buccinator)*, varieties of geese, brant, and ducks; of the latter may be mentioned the sprig tail (*Anas acutus*), green-winged teal (*Anas Carolinensis*), blue-winged teal (*A. discors*), red-head (*A. ferina*), canvass back (*A. vallisneria*), and

wood duck (*Aix sponsa*), the rosy spoon bill (*Platalen Ajuja*), long-billed curlew (*Numenius longerostris*), short-billed curlew (*N. brevirostris*), red-breasted snipe (*Scolopax grisen*), yellow legs (*S. flavipes*), tell-tale (*S. melanolencus*), the prairie hen or pinnated grouse (*Tetrao cupido*), a species of quail (*Ortyx texanus*), varieties of the heron, woodpecker, and finch, from which birds of great beauty might be obtained.

3. Red-fish or spotted bass, the *Corvina ocellata* of De Kay; sheep's-head, *Spurus ovis* (Mitchell), peg-fish, probably of the family *Suanidæ Grande ecaille*; Jew fish, croker, trout, and mullet, all of which are esteemed as food, and could doubtless be acclimated in similar latitudes.
4. Horned lizard, commonly termed horned frog, whose food consists almost exclusively of the different species of ant, and would be therefore a valuable acquisition wherever these destructive insects abound. With care and attention this reptile might be transported to any distance.
5. White oak (*Quercus alba*), live oak (*Q. virens*), iron or post oak (*Q. obtusilora*), the bark of the red oak (*Q. rubra*), is used for tanning; lime tree, or bass wood (*Tilia Americana*), red cedar, deciduous cypress (*Cupressus disticha*), maple, and walnut; Ornamental Trees —Varieties of the magnolia and of the locust tree (*Robinia catalpa*), tropon (*Ilex vomitoria*), dog-wood (*Cornus florida*), wild rach (*Cerasus Caroliniana*); wax myrtle (*Myria cerifera*), is valued for the wax obtained from the seed pod, and the pecan (*Carya oliveæformis*) for the excellence of its fruit.
6. The number of medicinal plants in the Southern States published for present use in the hospitals amount to sixty-four, of which the following may be noted as in common use:—Indian turnip (*Arum tryphyllum*), Virginia snake-root (*Aristolochia serpentaria*), pleurisy root (*Asclepias tuberosa*), wild senna (*Cassia marelandica*, worm seed (*Chenopodium anthelmenticum*), dog-wood (*Cornus florida*), Jamestown weed (*Datura stramonium*), boneset (*Eupatorium perfolialum*), winter green (*Gaultheria procumbens*), Indian physic (*Gillenia trifoliata*, *Lobelia inflata*), poke-root (*Phytolacea decandra*), Georgia bark (*Pinckneya pubens*), white oak (*Quercus alba*), bitter-sweet (*Solanum dulcamara*), pink-root (*Spigelia Marilandica*), fever-root (*Ticosteum perfoliatum*), American helebore (*Veratrum viridum*).
7. The fibrous plants of this country which are used for manufacturing purposes are indigenous to, or cultivated in, Great Britain or its dependencies.
8. The ground nut (*Apios tuberosa*), if not already introduced to Great Britain, merits the attention of the Acclimatisation Society; it is productive, nutritious, and easily cultivated. The vines of this country are also worthy of notice; good wines have been obtained from the Cataroba, Muscalline, Mustang, Post oak, and El Paso grapes. Of the grasses in this state the mesquit is one which particularly merits the attention of the Acclimatisation Society; it is nutritious, affords good pasturage and forage, and is eaten with avidity by all graminivorous animals. A grass, termed rescue grass, is also much esteemed for winter pasturage; other grasses, termed wild oats, wheat grass, winter grass, grammer grass, crow-foot, and wild rye, are indigenous to the State, and have been commended for pasturage.
9. (*a*) The different breeds of English horned cattle, horses, sheep, and swine, would be beneficial and improve the native stock.

GOTHENBURG.

2. Swedish hjerpa (*Tetrao bonasin*, Lin.) thrives best in mountainous

districts overgrown with birch and pine wood. Some varieties of the woodpecker (*Picus leuconotus*, Bechst), (*Picus tridactylus*, Lin.), (*Picus canus*, Gmel), might be both useful and profitable in the mountain forests of Scotland.

3. Pike perch (*Lucioperca sandra* of Cuvier), a fish of excellent flavour, thrives best in lakes with deep clear water (Swedish Gös).
5. A variety of maple (*Acer platanoides*, Lin.), prefers loose soil with dry substratum; a variety of alder (*Alnus incana*, Wild), same soil, would seem to suit for the north of Scotland. The Fir (*Pinus abies*, Lin.), rather rich soil with mixture of clay, and a low situation, ought to be protected from high winds.
6. *Angelica littoralis*, Fr., sandy soil along the sea coast.
8. Varieties of Trefoil—*Trifolium hybridum*, Lin., requires a rich soil; *Trifolium mountanum*, Lin., high situation, principally on secondary or tertiary formations; *Trifolium agrarium*, Lin., dry situation; *Trifolium spadicum*, Lin., high and dry situation. Vetches—*Vicia piciformis*, Lin.; *Vicia dumetorum*, Lin.; *Lathyrus heterophyllus*, Lin.: excellent plants for fodder; require a strong soil and a substratum of lime or shells. Milk Vetches—*Astragalus oroboides*, Horn, and *Phaca frigida*, Lin., may be planted in mountainous districts in Scotland. *Calamagrostis silvatica*, De C.; *Calamagrostis acutiflora*, De C.; *Calamagrostis Halleriana*, De C.; require a dry stony soil; and *Calamagrostis Hartmanniana*, Fr., a low, moist situation; *Melica ciliata*, Lin., dry soil, limestone formation; *Agrostis rubea*, Wg.; *Poa cenisia*, Alb. Oats, *Triticum violaceum*, Horn, high mountainous districts; *Bromus tectorum*, Lin.,; *Festuca duriuscula*, Fr.: dry, meagre soil. *Poa suditica*, Henk.; *Poa serotina*, Ehr.; *Aira uliginosa*, Wg.; and *Bromus inermis*: require a low, moist situation. *Glyceria remota*, Fr.; *Vahlodea atropurpurea* Fr.: moist situations in mountainous disdistricts. *Triticum hebestachyum*, Fr.; *Fluminia arundinacea*, Fr.; *Aira bottnica*, Wg., sea-coast; *Psamma baltica*, R. S., light, shifting, sandy soil; *Carex Norwegica*, Wild; *Carex salina*, Wg.; *Carex maritima*, Mull.: moist situation on the sea-coast. *Carex turfosa*, Fr.; *Carex cæspitosa*, Lin.: swamps. *Carex ericetorum*, Poll., dry, exposed situations.

HALIFAX (Nova Scotia).

1. Musk rat (*Fiberzibethicus*), red fox (*Vulpes fulvus*), ground squirrel (*Tamia striata*).
2. The common wild or dusky duck (*Anas obscura*) would prove useful as food, the flesh being of particularly good flavour, approaching that of the canvass-back duck (*Aythga vallisneria*), so well known to epicures. The spruce partridge (*Tetrao Canadiensis*) has been introduced previous to this date, but did not succeed, the specimens dying from some unknown cause soon after their arrival.
4. The firefly (*Lampyris corusca*), as an ornamental insect, might be of some value. On dark nights it would fly about the woods and gardens, emitting its spark-like light at intervals, and presenting a new feature in the natural history of England.
5. White maple (*Acer eriocarpon*) and sugar maple (*Acer saccharium*) would be of service as ornamental trees, for their ever changing tints of foliage in autumn make even the sombre forests of the west to present a scene of unrivalled splendour.
6. The Indian cup or pitcher plant (*Sarracenia purpurea*), supposed to be a remedy for small pox; the gold thread (*Coptis trifolia*) used as a tonic.
9. The whole province is more or less covered with an unbroken forest, composed principally of pine (*Pinus strobus*), spruce (*Abies alba*,

Abies nigra, and *Abies rubra*), birch (*Betula papiracea* and *B. nigra*), beech (*Fagus ferruginea*), white maple (*Acer eriocarpon*, and sugar maple (*Acer saccharium*), and dotted over with innumerable lakes of small and large size, the whole intersected with rivers and brooks. Portions of the country, especially the low-level lands, situate near the great basin of Minas, celebrated for their feeding properties, present a large extent of rich pasturage for ruminant quadrupeds. All the rocky hills, forests, and open barrens are literally covered with small berry-bearing shrubs and plants, which are eagerly devoured by both quadrupeds and birds, and it may be safely stated, that any animals given to browse upon young trees or shrubs, and fond of an extensive range of dense forest, would in the capital of Nova Scotia rapidly increase. The unfrequented districts of the interior with their thickets of spruce, are particularly suitable for the capercallie of Germany (*Tetrao irrogallas*), which lives chiefly on the buds and shoots of that tree, while there are probably several other forms known to the Society which would prove a valuable addition to the local fauna of this interesting country.

10. There already exists an institution supported partly by public grant and private enterprise, owned and presided over by an enthusiastic naturalist, Mr. Andrew Downs, well known to the Zoological Society of London.

HAMBURG.

1. The climate of Northern Germany is so much the same as that of Great Britain, that the Quadrupeds are generally the same in both countries. In the British Colonies, however, of Australia and New Zealand, the German shrew mouse and hedgehog might be useful, especially the latter, for the destruction of snakes, and these would be attainable without much difficulty.
2. German Buzzards would thrive in Australia, but would be costly, and the transport hazardous.
3. The sander, or pike-perch (*Lucio perca*), is a fish commonly eaten in Hamburg and other parts of Germany, at the best tables, and, from its large size and excellent flavour and abundance in certain localities, is a fresh water fish of great value. Arrangements have already been made by Mr. W. A. Lloyd, Curator of the Aquarium of the Zoological Society at Hamburg, for sending specimens of this fish regularly to London, by means of an apparatus fixed on board one of the steamers plying between Hamburg and London, of which the Acclimatisation Society is already aware. The small sturgeon (*Accipenser sturio*), the pope or raffe (*Acerina vulgaris*), and the large loach (*Cibitis fossilis*), are also fish well known at Hamburg, and which might be made more valuable in England than they now are.

9. (*a*) The Manguste (*Herpestes*), from India and South Africa, would be useful in Germany for killing snakes, rats, and mice. The following wild dogs from India, Africa, America, and Australia, would improve the German breeds of dogs—viz., *Canis primœvus*, *C. ratilans*, *C. dingo*, *C. Simensis*, *C. anthus*, *C. aureus*, *C. carnivorus*, *C. jubatus*, *C. latrans*. Small sorts of Indian cats, some foreign hares, the wool-mouse, wild asses, mountain horses, and other hoofed quadrupeds from transatlantic countries would thrive and be valuable in Germany and Central Europe. Such as the *Asinus kiang*, *A. hemionus*, *A. onager*, *A. Africanus*, *Hippotigus zebra*, *H. Burchellii*, and *H. quagga*. More might be done also in the importation of ruminating quadrupeds—viz., the *Auchenia huanaco*, *A. alpaca*, *A. vigogna*, *Moschus moschiferus*, and

Tarandus rangifer. Of stags—viz., *Cervus Wallichii, Aristoteles, Duvancellii, Axis, Virginianus, leucurus, canadensis, simplicicornis, equinus, mollucensis, porcinus*, &c., and of antelopes—viz., *Antelope vicas, picta, oreotragus, pygarga, furcifer, lucophoea, goral, montana*. Wild goats and sheep, horned cattle, all sorts of the *Bos* and *Bubalus* will always thrive in Germany; and South African bush pigs and Indian pigs would also be a great requisition. The reindeer might easily be acclimatised in the German Alps and in the Scottish Highlands, but not in warmer climates. (*b*) Of birds of prey the only one not yet imported into Germany is the snake vulture from Africa. The North American buzzard would, of course, thrive here. Owls and other roving birds which do not migrate, pigeons, chickens, and waterfowl from transatlantic countries, particularly the last, all merit attention in Germany.

10. No such organisation exists in Germany, and it would take much time and trouble to call it into action.

REMARKS.—The above information is furnished as regards quadrupeds, birds, and insects by Dr. Brehm, the learned director of the Zoological Gardens here; and, as regards fish, by Mr. W. A. Lloyd, As regards trees and plants, inquiries have been made of Mr. Booth, the eminent nursery gardener at Flottbeck, near this City, and of other horticulturists.

HOBART TOWN (TASMANIA).

1. The only Tasmanian quadruped of much economic value is the brush kangaroo, very superior leather being made from the skins. It feeds well in confinement, but only produces one annually. Like most of our indigenous marsupial quadrupeds, this animal is fast disappearing before the creatures introduced from Europe, and it may therefore be safely concluded that any attempt to acclimatise it amongst animals of higher organisation will fail.
2. The Cape barren goose (*Cereopsis Novæ Hollandiæ*), found on several of the islands in Bass's Straits, has been frequently domesticated. It is a hardy bird, of good quality, and as large as the common goose. It should be kept apart from other poultry, as it is of a very quarrelsome disposition. The shoveller duck (*Spatula rhyncotis*) is of excellent quality, but has never been domesticated. The bronze-winged pigeon (*Peristera chaleoptera*), though never domesticated, has increased in number considerably with civilization. It is larger than the common blue rock pigeon, and of good quality. The young birds are easily obtained. A smaller species (*P. elegans*) is of better quality, but inhabits the dense scrubs, and is comparatively rare.
3. The only Tasmanian fresh-water fish (known as the cucumber mullet) that would be worth the transport, could not be kept alive in confinement. It is so sensitive as to be frequently killed by the prick of the artificial fly.
5. None that would be of much service in Europe.
7. An indigenous flax, said to produce fibre of very fine quality; seeds might be easily sent. Many of the native plants yield very tough fibres, but no use has ever been made of them. They belong to the genus Pimelia.
8. Indigo (*Indigofera* Sp.), bearing considerable resemblance to the indigo plant of commerce, is found growing luxuriantly in poor sandy soils; its qualities have never been tested.
9. Any of the game, song birds, or large fresh-water fish, belonging to the northern temperate zone would be valuable.
10. Two years ago an Acclimatisation Society was started in Hobart Town, and an unsuccessful attempt was made to obtain a grant-in-

aid from the Tasmanian Parliament. It is feared, however, that the Society will shortly be extinct, as the funds at its disposal are quite insufficient to carry out any of its objects. Five Commissioners have been appointed by the Tasmanian Government to superintend the arrangements for the introduction of salmon to the colony, to whom the sums voted for the purpose by the Victorian, New Zealand, and Tasmanian Parliaments have been intrusted. All other work connected with acclimatisation in Tasmania will probably henceforth devolve upon our Royal Society, whose members have invariably exerted themselves in this direction.

HONG KONG.

1. The sheep and ox of China would do well in Great Britain. The pig has already been exported largely hence to England. A useful experiment might be made by introducing the powerful and hardy Tartar pony from the North of China. All these animals are easily and cheaply procured, and are likely to bear transport well.
2. The fowls of China are well known at home. The local pheasant might be introduced with advantage. These are easily got.
3. The fish of China will not bear comparison as food with those of the British seas. For ornament the gold fish are to be mentioned.
4. None but the silk-worm.
5. There is no timber here to be noted as excelling in use, but the neighbouring island of Leuconia (Manila) abounds with wood most valuable for shipbuilding, &c. A report on the woods of Manila was made to the Colonial Office, for the use of the Admiralty, in Despatch No. 141, of 18th August, 1859.
6. The Colonial Surgeon suggests the Sü Kwan Chee, the seeds of which are invaluable for the treatment of worms in children, as they may be boiled or roasted, and are eaten as readily as chestnuts.
8. The vegetables esculent peculiar to this place may be named the note cok (not indigenous, but imported from the Cape of Good Hope), the yam (*Dioscorea batalis*), Indian corn, bamboo roots, tomatoes, and egg plants. There are also peculiar species of cabbage and potato. No information can be given as to the probability of the above flourishing in Europe; but as they are almost all seen in perfection here in the cold weather, the likelihood is that they would succeed at home.
9. Experiments in this way are made here from time to time.
10. There is no present prospect of organising a Society with this view. The task of introduction is, as stated in the last answer, undertaken irregularly by individuals.

JANINA (Albania).

5. Pine, walnut, ash. The plane also is indigenous here; it is deciduous, requires heat and well-watered ground, attains great size, and when in foliage is one of the most beautiful of trees; its timber is tough and close-grained, and is well fitted for furniture and all sorts of cabinet work.
6. There are many, but they are known only to the empirics of the country, who, inheriting the knowledge of them, and transmitting it as an heirloom to their children, will on no account divulge the secret.
9. (*a*) Rams and stallions of superior breed; (*c*) cotton.

LIMA (Peru).

1. *Cervus antisiensis* (F. Cuv.), *Canis azarce* (Fox.)
2. *Phœnicopterus igni palliatus*, *Quirquidula cyanoptera* (Veill), *Q. Creecorides* (Veil), *Discors* (Wilk), *Versicolor* (Veil), *Dafila Bahamensis*

(Sin), *Rhinchaspis Maculata* (Zey), *Erismatura ferruginea* (Eyton), *Oedichmus superaliares* (Psch), *Crotophaga cassu* (Less).

3. *Corvina deliciosa, Corvina minor* (Ts.)
5. *Jacaraudia acutifolia* (D.C.), *Salor Humboldtiana* (Bow), *Sanbucus Peruvianus.*
6. *Culcitum,* Sp., *Guaphalium Verravira,* and a species of *Cryptochæte.*
8. *Jetropha api* (Poll.), *Arracho esculenta, Batatas edulis, Amond Cherymoha, Persica gratissima, Lucuma, Abbooata, Bumchosia, Armeniaca, Malprigia setosa.*

MADAGASCAR.

2. Teal and other wildfowl. The dendrocygna, arcuata, and viduata, are very hardy, and would, I think, thrive well at, and prove an acquision to, the Mauritius.
3. The goramy and crawfish.
4. The Hymenoptera bee.
5. The natoo is a fine hardy tree; the wood being compact, of a dark-red colour, is peculiarly suited for the manufacture of furniture, whilst the tree itself would, I think, prove an acquisition to our parks.
6. The *Tanghinia venenifera,* a species of cinchona, the *Mucuna pruriens,* and a Polygala, much used by the natives.
7. Several belonging to the order Asphodeleæ, are found in Madagascar. The rofia palm *Fagus ruffia* is much used for making native cloths and ropes, while another species, called by the natives "avy avy," would, I think, prove useful for the manufacture of millboards, paper, &c.
9. (*e*) Northern grasses, and both species of Trifolium.

Remarks.—The soil of Madagascar, especially on the coast, appears suitable for the cultivation of cotton, though the experiments made as yet to grow this plant have not proved satisfactory.

MADEIRA.

2. Green canary (*Fringilla butyracea*), black cap warbler (*Sylvia atricapilla*).
4. The cochineal.
5. *Orcodaphne, O. fœtens, O. Persia, O. indica, Laurus barbusano.*
7. The aloe and the *Phormium tenax.*
8. *Ariem colocasia,* arrowroot (*Curcuma leucorhiza*).
9 (*a*). The Chinese sheep. (*d*). Ailanthus silkworm. (*e*). Ailanthus; chincona, especially of the succubra, calisaya and lancifolia species, grafted East Indian mango, mangosteen plant and bunch grass.
10.—A Portuguese Agricultural Society.

MALAGA.

1. The mule.
5. Pinsapo pine (*Abies Pinsapo*).
6. This district is famous for most medicinal plants, growing in a wild, uncultivated state.
7. The Esparto, bass feather grass, or Spanish rush (*Spartium junceum,* Genet d'Espagne), palmito, or scrub palm (*Chamærops humilis*), sugar cane trash, *Aloe perfolita.*
8. Spanish mellon, pumpkin, onion, tomata, sweet potato, maize, or Indian corn, fig, grape, almond, olive, prickly pear, or higo chumbo (*Cactus opuntia*).
(9. (*b*) The pheasant and grouse.

MESSINA.

6. None but the castor-oil plant, which is indigenous, and grows spontaneously within this consular district. The young plants may be

obtained at a reasonable rate, and they would bear the risk of transport.

9. None but coton seed, which might be sown to advantage.

NANTES.

3. Sardine.
6. Tisan.
7. Common aloe; the potatoe.
9. It would require much time to ascertain this.
10. The Societé l'Acclimatation of Paris.

NASSAU.—Nil.

NICE.

3. The sardine and the thunny.
4. The green (tree) frog.
5. Olive, caroul or locust, phytolacco (*Divica*), pepper tree (*Archinus molle*), tobacco tree, and the *Cratugus glabra*.
7. The American aloe.
8. Japan medlar (*Nedficlus Japonica*), bears a yellow fruit in abundance, about the size of an egg, which is much prized as food in summer.
9. (*e*) Rhubarb and early cucumber plants.

NEWCHWANG (China).

4. There is a silkworm reared in the north of this province, which is fed on oak leaves, which yields a peculiar coarse silk, and which I think might, perhaps, with advantage be acclimatised in England, as the climate here (Manchuria), though much colder in the winter than in England, is only a very little hotter in the summer. The worm itself I have not been as yet able to procure, as it is now winter, but I have seen the chrysalis, which the natives here use as an article of food; they average about an inch and a quarter long and an inch and a half in circumference.

PALERMO.

1. The male ass
7. The American cotton seed.

PARA, (Brazil).

1. The tatu, a species of the Armadillo. The qeada, or deer.
2. Of the parrot tribe—the arara, anaca, maracana, papagio, and peiroquito; of the toucan tribe—the aperema, aracari, and toucano; of the duck tribe—the ananais, maraca, and masacuo; of the snipe tribe—the arancuan crocorado, sesacura, and sevorina; of the flamingo tribe—the guasa, culheira, curicaca, gasca real, garca pardi, gairota, and magoari; of the eagle tribe—the ama, licorne, and gasiao; of the crane tribe—the jaburn, mulac, and cuaua; of those which are very beautiful or easily domesticated—the galo da cerra, prissoca, thessoura, rosingoe, guissiasu, tenten, andpombas.
3. Tainha, bagre, cacao, douade, filhote mucu, mapasus, piracucu, sardinha, &c.
4. There are myriads of insects, mostly unknown, but requiring time and money to collect.
5. There is said to be the finest and most durable timber for ship building in the vast plains bordering the whole of the great Amazon, possessing the singular quality of incombustibility as well as impenetrability by insects. There are also eighty-four species of wood used for ornamental building and veneering purposes; some most beautiful.
6. Anthelmintic, diuretics, emetics, drastics, emenagoges, &c.

8. Balata, bread tree, macashera, a species of yam, the sweet potato, and some species of melon.
9. (*a*) A few good horses would be most acceptable, and cattle of all kinds.

PARIS.

1. The Imperial Jardin des Plantes, and the Société Imperial d'Acclimatation, of Paris, possess almost every sort of introduced quadrupeds, deer, sheep, rabbits, kangaroo, &c., &c., all likely to bear the risks of transport, but to give an account of their respective probabilities of reproduction would entail heavy expense.
2. The same Imperial establishments contain an immense number of all sorts of birds.
3. The same Imperial establishments contain some, but in less number.
4. The same Imperial establishments contain some.
6. Many in the Jardin des Plantes.
7. Very few, if any.
10. The Société Imperiale d'Acclimatation.

PATRAS.

5. The trees of Greece are known, and those that will bear the climate exist in England.
7. The aloe.
9. (*e*) Shumac plant.
10. No such organisation exists, and the Greks are too poor, and the country too unsettled, to allow them to think of such things.

PRINCE EDWARD ISLAND.

2. The *Tetras umbellus*, or ruffled grouse.
3. Varieties of the oyster.
8. The sumach (*Rhus Virginiarum*).
9 (*e*). The turbot and the sole.

RAGUSA (Austria).

5. Vine, olive, palm, and mulberry.
6. *Chrysanthemum Turcanum*.
7. *Agave Americana*.
9. (*d*.) The sponge of Curgela, Meleda, and Pergosta.

REUNION.

2. Madagascar teal, large quail, cabook, turtle dove, blackbird, aigrette, or heron.
3. The gourami.
5. The natte.
6. The agane (*Faux aloes*), the bacoa (*Pandaus utilis*).
8. The pepangaille of India, and chou-chouf Brazil.
9. (*a*) The rabbit. (*b*) The partridge, the peasant, and any insectivorous bird. (*c*) The perch and tench. (*f*) The silkworm.
10. An Acclimatisation Society.

ROSARIO (Santa Fe, Argentine Republic).

1. The horse, cow, sheep, and mule.
2. The cardinal and the ostrich.
3. The dorado, the bagro, the pekore, and the mojora.
6. The rais (or root) of melçonçillo.
7. The chuguar.

SANDWICH ISLANDS.

2. Sandwich Island goose.
5. The Avavia Hau (*Calophyllum inophyllu*), *Cordia Sardro*, kanivila, lama, mamani, and the sandalwood.
7. Wild cotton; there is also a tree which produces a sort of vegetable silk.

6. The awa.
7. Nanket bunssonetia papyrifera, mamake, *Procris alba* and *enclastoma folia*, nerandia, urtica, bread fruit, olona, a species of elatostemma, palm plants, tree-ferns of the genus *Cobotiana*, with the palm, bark of the hau, *Elæcocarpus vifidus*, the domesticated *Tourvroga gigantea* and *Agave Mexicana*.
8. The kala, *Colocasia esculenta*, ornamental *Colocasia macrorhizon*, several species of yam, *Dioscoræa bulbifera*, *alata*, and *pentaphylla*, sweet potatoes (*Batatas*), in many varieties, the *Tacca pinnatifida*, yielding a fine arrowroot, several ferns with edible roots (*Cibotium Chamieron* and *Nesyicris*, *Marattia alata*, *Nephrodium ogatheower*, Ki-Cordyline ti, bread fruit, cosvant, many species of banana, Ohia apple (*Jambosa malacensis*), and the guava. Many fruit trees and plants have of late years been imported from foreign countries. The most useful fodder grass is an imported one, *Cynodon dactylon*. The leaves of the *Cordiline ti* are a valuable fodder.
9. (*a*) Alpaca. (*d*) Cochineal. (*e*) Cinchona tree.
10. The Royal Hawaia Agricultural Society.

SAN FRANCISCO (California).

2. The mountain quail, (*Callipepla picta*, of Gould) is the only desirable bird I know of for the Society to introduce into England; it is hardy, and nearly double the size of the ordinary quail of either this country or Europe. The dusky grouse, a very fine bird, is found very high up in the mountains, but it would be very difficult to procure, and very doubtful if it would thrive except on mountains.
5. The pine and cyprus.

SANTANDER.

5. Cork tree, encina, orange and lemon.
8. All kinds of vegetables grown in England thrive here in the open air a month in advance. On the other hand several indigenous ones require hot-house treatment in England.
9 (*e*.) The alpaca.
10. Agricultural Societies at Madrid, Barcelona, Valladolid, Santander, &c.

SERVIA.

8. Maize.

SIERRA LEONE.

2. The partridge and several kinds of pigeons.
5. The African oak and some other hardwood trees.
9. (*a*) A better breed of cattle for milk; sheep would be very desirable. There is an extraordinary epidemic amongst horses here, which die from what is called loin disease. It would be a great benefit if some remedy could be discovered.

SOUDAN.

1. Camels of a better description than are produced in Egypt, and more likely to adapt themselves to the climate of Australia. Easily purchased from £3 to £4 each.
2. Bustard (*Otis nuba*), readily obtained in Sennaar Taka and Kordofan. Ostrich, desirable, I should think, in Australia, the young of which are to be obtained in Sennaar Taka and Kordofan, for one shilling each.
3. Garmoot, is excellent food, and being hardy, might perhaps bear acclimatisation elsewhere.
5. Jogân and kootett, two species of ebony; seeteck, a species of *Anogeisus leiocarpus*.
7. Usher (*Catotropis procera*)

SOUKOUM KALE.

1. I only know of the pine-marten, which is indigenous in this part of the Caucasus. Its skin is an important article of commerce, and is exported solely to the interior parts of Russia. This little animal may possibly be acclimatised to advantage in Great Britain. It may be caught alive here, but I cannot answer for its bearing the risk of transport on so long a voyage as that to England.
5. Box tree, remarkable in this country for girth, colour, and freedom from knots. A quantity of this timber is annually exported to Constantinople, and thence to the English markets.

REMARKS.—When the political condition of this country shall have become more settled, and foreigners be allowed to travel about unmolested, much information that is valuable to the Society may be brought to light.

ST. CHRISTOPHER.

1. The agoute.
2. The quail (*Tetro columix*).
6. The castor-oil plant (*Ricinus communis*), and tobacco plant.
7. The cotton plant.
8. Yam (*Dioscorea*), sweet potato (*Batatas*). Food-bearing trees or plants from tropical countries would be beneficial if introduced into this island.
10. None exists, but it could easily be called into existence to undertake the task of introduction if thought advisable.

STETTIN (POMERANIA.)

9. Several vegetables have recently been introduced by Pomeranian branches of the Berlin Acclimatisation Society, as *Phaseolus turcicus*, &c.
10. Branches of the Berlin Acclimatisation Society, Pomeranian Agricultural Society, and Agricultural Academy at Eldena.

SAINT LUCIA (WEST INDIES).—Nil.

ST. MICHAEL'S (AZORES).

5. *Laurus tudica*, *Laurus fœtans*, *Olea excelsa*.
10. An Agricultural Society.

ST. THOMAS (DANISH WEST INDIES).

1. The Dasyprocta Aguti.
2. Quail (*Ortyx Sonninie*), Virginian quail (*Ortyx Virginianus*).
5. *Swietenia mahogoni*, poniciameleta, nutmeg, clove, cinnamon, and camphor.
6. *Cassia obtusifolia*, *Aloe vulgare*, and *Andropogon citratum*, lemon grass.
7. *Bromelia penguinea*.
8. *Bromelia ananas*, *Panicum jurentorum*, Guinea grass.

ST. VINCENT (WEST INDIES).

1. Agouti (*Cavia agouti*).
2. Ramier (Columba), mountain dove, ground dove, *C. passenio*, Parrot (*Psittacus Guildingii*).
3. Cavally (*Scomber chlonas*), Spanish mackerel (*Scomber saliens*), jack (*Scomber trachurus*), Ballatroo (*Esox Brasiliensis*), river mullet (*Mugil plumiere*)
4. Large firefly (*Elater noctilicus*).
5. Green heart (*Lonchscarpus violaceus*, or *sericeus*), bullet (*Mimusopa globosa*, fiddle-wood (*Citharexylum*, *cirenium*, or *melano-cardium*), mastic, white cedar (*Bignonia leucoxylon*), locust (*Hymenœa courbaril*).

6. The *Cassia obovato*, *Cassia pstula*, *Smilax sarza*, and other species, producing sarsaparilla. *Ossampeles pareira* and *Quassia amara*.
7. *Hibiscus elatus*, *Agave Americana* and *vivipara*, May-pole; *Bromelia karcias penguis*, *Ananassa*, Indian pine, fibre, known as lapile; *Cocas aculeata grugru*, *Poths*, *Pitcairnia*, two species silk grass; *Heliconia citræ*, wild plaintin; *Musa paradisiaca*, plantain; *Musa sapientum*, banana.
8. *Christophine sectium edule*.
9. (*a*) The Monguso, Angora goat. (*b*) Aylesbury ducks, mallu fowl, curassow, Ceylon, or otherwild pea fowls, pheasants of all kinds, partridges, quail, crown pigeons, and pigeons of any kind, except the domestic pigeon. (*d*) The common honey-bee, the Ligurian bee, and the castor-oil silkvorm, attacus, and cynthia. (*e*) Plants or seeds of the South Sea Island tara, of black pepper, of the different species of tea, of Paraguay tea, of the Sierre Leone peach, of the palm oil, of the sago and taliput palms, of the male bariboo.

SYDNEY (New South Wales).

1. The great red kangaroo (*Osphrantu rufus*), Boomer Forrester, "old man," or great grey kangaroo (*Macropus major*); black Wallaroo (*Osphrantu robustus*), brush-tailed rock Wallaby (*Petrogale penicillata*), rufus-necked Walaby (*Halmaturus ruficollis*), black Wallaby (*Helmaturus malabaus*), Pademelon Wallaby (*Helmaturus Thetidis*), bettong, or kangaroo rat (*Hypsiprymnus murinus*). There are two small, but very beautiful kinds of flying squirrel: the sugar squirrel (*Belidens siurens*) and the short-headed Belidens (*Belidens breviceps*). The other larger species of flying squirrel is the long-tailed Belidens (*Belidens flaviventris*). A very pretty animal is the brush-tailed Phascogale (*Phascogale penicillata*), and the rabbit-rat (*Hapalotis albipes*). The rufous jerboa kangaroo (*Bettongia rufescous*). Among the opossum tribe the following could be procured:—Vulpne opossum (*Phalangista vulpina*), short-eared opossum (*Phalangisa canina*), ring-tailed opossum (*Phalangista Cookii*), and the wooly opossum (*Phalangista laniginosa*). Of the bandicoots there are two species, the *Parametis nabuta*, or long-nosed bandicoot, and the *P. obesula*, or short-nosed bandicoot. Wombat, or "badger" of the colonists (*Phascolomys wombat*). The koata, native sloth, monkey, and native bear of the colonists (*Phascolaretus uncreus*); water-mole, or Platypus (*Ornithorhynchus paradoxus*), and *Echidna hstrix*, or native porcupine ant-eater.
2. The bustard or turkey of the colonists (*Otis Australis*), the Wonga-Wonga pigeon (*Leucosuria picata*), brown-winged pigeon (*Phaps chalcoptera*), fruit-eating pigeon (*Carpophaga magnifica*), white-head fruit pigeon (*Carpophaga eucomela*), spur-winged plover, pewit, or alarm-bird of the colonists (*Lobivanellus lobatus*), Australian land-rail (*Rallus pectoralis*), red-bill (*Porphyris melanotus*), Nankin or quaker heron (*Nycticorax Caledonicus*), brush turkey (*Talegalla Lathami*) semi-palmated goose (*Anseranas melanoleuca*), wood-duck (*Bernicla jubata*), black duck (*Anas superciliosa*), teal (*Anas punctata*), black swan (*Cgnus atratus*), New Holland Cercopsis (*Cercopsis Novæ Hollandiæ*) The following may be introduced for ornament, and as zoological luxuries:—Lyre pheasant (*Munura superba*), satin bird (*Ptiloorhynchus holosericcus*), regent (*Sericulus chrysouphalus*), rifle (*Ptilois paradiscus*), coach-whip (*Psophodes crepitans*), razor-grinder (*Seiura volitans*), bell (*Myrantha melanophys*), pheasant cuckoo (*Centrops phasianus*), hornbill cuckoo (*Scythrops Nova Hollandiæ*), pheasan's mother (*Orthonyx spinicaudus*), cat-bird (*Ptilonorhynchus Smitie*), native companion (*Grus Australasianus*), jabiru (*Mycteria Autralis*), and various species of cockatoos and parrots.

3. The Murray River cod perch (*Gristes Macquariensis*), the perch, and the Australian sardine or srat (*Megalops setipennis*).
5. The iron bark, box, blue gum, flooded gum, spotted gum, black butt, mahogany, stringy bark, tle turpentine (*Syncarpia*), bastard box of the northern districts, a pecies of *Lophostemon*, and broad-leaved tea-tree (*Callistemon hideroylon*), red cedar (*Cedrela Australis*), pine (*Araucaria Cunninghamii*), nd the white beech (*Vilex*).
6. The *Eucalyptus*, acacia (*Accia falcata*), *Doryofora sassafras*, and *Smilax glyciphylla*, or the sweet tea of colonists.
7. The *Sterculia heterophylla*, *Brachychiton laridum*, *Hibiscus heterophyllus*, *Commersonia platypylla*, *Urtica gigas*, *Urtica pholimophylla*, and some one or two grasse and reeds.

TABREEZ.

1. The wild sheep or argali.
2. The perdrix royal (kapké dureh).
3. The nakar.
6. This province would be fourl to be rich in medicinal plants were a member of the faculty to dvote himself to their discovery.
7. The cotton, hemp, and flax.
8. The vine of Azerbidjan.
9. (*e*) The cotton seed.

TAGANROG.

1. The buffalo.
2. The bustard, the strepette, and a variety of wild duck.
3. The sturgeon, the sterlette (a small species of sturgeon), and the soudack.
5. The white acacia.
6. More than probable, were proper researches made.
7. Flax.
9. Insects, trees, plants, birds, and fish.

TAMPICO.

2. The Black Pheasant.

Remarks.—Whether in the future it may be found practicable to extend the operations of the Society or not in this country, it is but too evident that any experiments undertaken in the present unsettled state of Mexico can only end in failure and the sacrifice of any money which may beinvested for the purpose.

TENERIFFE (Canary Islands).

1. Camel and goat.
2. Fringilla teyde (a variety of the finch).
4. Cochineal.
5. Pitch pine tree, and twenty-two different sorts of laurel.
6. *Virnea mocanera*, *Guanches*, *Cuorum pulverulentum*, *Fagonia cretica*.
9. (*e*). Trees and plants.
10. A garden for acclimatisation at Port Oratava; a society called "Las Amigas del Pays."

TORTOLA (Virgin Islands).

3. Turtle.
5. Bullet wood.
6. An examination of this subject might produce some useful additions to the London Pharmacopœi, if conducted by a competent medical botanist.
7. The cowtor, a kind of wild alo, and the common date, both of which yield abundance of fibre.
8. I am not aware of anything here especially peculiar to these islands. I venture to suggest to thepromoters of acclimatisation the im-

mense value of the guinea grass of the West Indies in the feeding of stock. I have it here flourishing at an exposed elevation of 1,000 feet above the level of the sea, and, notwithstanding a long continuance of drought, it is green and succulent. If it has not been already introduced, I believe that its introduction into Australia would be an immense benefit, especially for stall-feeding cattle in the neighbourhood of towns. It will bear cutting continually, and readily seeds after a little rain, so that it could be propagated without any difficulty, while the yield of fodder per acre would be, I think, far superior to any other kind of grass.

9. I am not aware of any. Not one-fourth part of the natural resources of the islands is yet developed.

REMARKS.—If my remarks in answer to question No. 8 should induce the promoters of acclimatisation to experiment upon the guinea grass (if it has not already been introduced into Australia), I shall be happy to gather and forward a sufficiency of seed.

TREBIZOND.—Nil.

TRINIDAD.

1. *Cavia aguti* (Lin.), agouti France and England; *Cavia paka* (Lin.), lapé France and England; and *Dicotyles torquatus* (F. Cuv.), quoique, France and England.
2. *Columba speciosa*, viellot ramié guigar, France; and *Columba martinia*, (Lin.); perdris, France; quail, England.
5. *Mailura Xanthoxylum*, *Hieronyma*, Sp., *Calophyllum calaba*, *Cedrela odorata*, *Swietenia mahogoni*, *Carapa guianensis*, several *Laurinea*, several *Bignoniaceæ*, *Lecythis idatinion gualeguero*, *Hymenæa courbaril locust*, *Mora excelsa*, *Platymisicium platystashgura*, *Andira incracis*, *Mimosa arborea*, *Cordia geraschanthus*, *Vitex divaricta sio*, *V. capitata*, *Genipa caruto*, *Crescentia cujete*.
6. *Quassia amara*, *Simaba cedron*, *Carapa guianensis*, *Dorstenia contragerva*, *Contareo speciosa*, *Myrayierumno frutescens*, *Aristolochia trilobata*.
7. *Bromelia karatas*, *Sanseviera guinensis*, *Musa textilis*, and other species, *Pavonia racemosa*, *P. craiteata*, *Triumfetta semitriloba*, *Malachra capitata radiata*, *Boehmeria nivea utilis*.
8. *Bertholletia excelsa* (Brazil nut), *Guilielma speciosa* (pirijao), *Matisia coldata* (chujia chujia), *Munusops globosa* (ballata), *Panicum jumentorum* (Guinea grass), *Panicum molle*, Siv. (Pora grass), *Tithecalobiam saman jaman*.
9. *Musa enseta*, best cardamon plants, *Nigra fruticans*, *Euterpe edulis*, *Lodoicea Seychellarum*, *Hyphæne Thebaica*, *Attatea funifera*, *Artanthe elongata*, *Ficus Benjamina*, *Santalam album*, *Quocarpus edulis*, *Cinchonas*, others than *C. smeirubra*, which we have and which is thriving, *Bignonia chica*, *Chrysophyllum buranheim*, *C. pyriforme*, *Vittellaria paradoxa*, *Bassia catgrarea*, *Imbricaria maxima*, *Isonandra gutta*, *Diospyrus ebenam*, and other species giving ebony, *D. kaki*, *D. chloraxylon*, *Benzoin officinale*, *Phytocrenee gigantia*, *Anona Humboldtii*, *Monodora Myristica*, *Illicisum anisatum*, *I. religiosum*, *I. sanki*, *Tircunia excellenta*, *Cheirostemon Platanoides*, *Theobrama angustifolium*, *T. Ovalifolium*, *Vateria indica*, *Garinia celebica*, *G. pedunculata*, *G. Cochin Chinensis*, and others with edible fruit, *Hebradendron cambagioides*, *Mesua ferrea*, *Platonia inseguis* (Mart), *Glycosmus citrifolia*, *Feronia elephantum*, *Agle marmelos*, superior varieties of oranges, *Sansium domesticum*, *Sandoricum indicum*, *Erythroxylon coca*, *Sapindas Senegalensis*, *Nephelium sappaceum*, *N. runosum*, *Salacia pyriformis*, *S. Senegalensis*, *S. Roxburghii*, *S. viridiflora*, *S. radula*, *S. Sylvestris*, *Hovenia dulcis*, *Siphonia elastica*, *Croton eluteria* (Swartz), *Spondias mangifera*, *Melanorrhœa usitatatissima*, *Simaruba*

Guianensis, *Galipea officinalis*, *G. cusparia*, *Teighthus ottaria*, *T. canceolata*, *Pterocarpus santalinus*, *Pakia Africana*, *Paciharam edule*, *Vanilla sativa* and other species, *Phenacaspernum Amazonicum*, *Carludoveca rotundifolia*, *Areca alba*.

10. Botanic Garden.

TRIPOLI.

1. The horse, sheep, goat, horned cattle of an excellent breed, camel, mehri or dromedary, red deer, gazelle, antelope, warran, *Lacerta simus*, leopard, panther, wild cat, jackall, fox, hare, gabora, &c.
2. The eagle, vulture, hawk, ostrich, hubara, safsaf, quail, partridge, and a great variety of water fowl.
3. Fish, of the same species as are found in other parts of the Mediterranean, abound along the coast.
4. Butterflies, myriads of flies, beetles, the scorpion, centipede, and locust.
5. Pines of various kinds, some of very large size, the cedar, cypress, laurel, lorestinas, carrobe, oleandre, olive, arbutus, and the myrtle.
6. The sylphium, lotus, *Cocumis Colounthis*, cemeuria, *Assafœtida*, saffron, and *Hyoscyamus albus*.
7. The *Stipa tenacissima*.
8. The *Arundo festiscoides* and the *Attriplex halimus*, both an excellent forage for animals.
9. Many, did but the means of execution exist.

VENICE.

6. The ferococco confervoides *(Fucus confervoides)*.

VICTORIA.—(See Appendix C.)

VIGO.

9. Great improvements might be made in the breed of cows, horses, and sheep by crossing them with the English races.
10. The Economical Society of Friends of the country, residing at Santiago.

WEST INDIA ISLANDS.

7. The cotton plant.

ZANZIBAR.

7. A species of Pandanus and the common pineapple
8. The Mohogo or manive.

APPENDIX C.

ANSWERS FURNISHED BY THE ACCLIMATISATION SOCIETY OF VICTORIA,

TO THE ENQUIRIES ADDRESSED TO IT BY HIS EXCELLENCY THE GOVERNOR OF VICTORIA, AT THE INSTANCE OF THE RIGHT HON. THE SECRETARY OF STATE FOR THE COLONIES.

Inquiries Addressed to the Acclimatisation Society of Victoria, by His Excellency Sir Charles H. Darling, K.C.B., Governor of the Colony.

The gentlemen to whom these questions are addressed, are earnestly requested to consider the high importance which will be attached to the answers which they may return, and the service which they will render to the cause of Acclimatisation by endeavouring, to the utmost of their knowledge, to make those answers as full and otherwise as satisfactory as possible.

The main purposes of Acclimatisation are to introduce, acclimatise, and propagate in the United Kingdom and its Dependencies such Animals, Birds, Fishes, Insects, and Vegetables as are likely to be of use or ornament, whether for domestication or for varying the common food of the people, or for manufacturing, or for any other useful purpose; and whose constitution and habits offer a reasonable prospect of successful cultivation. It is obvious that in India, Australia, Canada, the Cape, and other important dependencies, unlimited scope is afforded for almost any variety of experiment.

It is confidently expected that the answers returned to these questions by Her Majesty's Ministers, Governors, and Consuls in different parts of the world, will bring together a mass of information on this interesting and highly important branch of knowledge as never has been collected before, and the benefit which these gentlemen will thus confer upon their fellow-countrymen will be in proportion to the fulness and exactness with which those answers are drawn up.

In replying to Questions 1, 2, 3 and 8, it is particularly requested that those special qualities which recommend the Quadrupeds, Birds, Fishes, and Vegetables as fit for food or domestic utility, may be described. As regards Quadrupeds, Birds, and Fishes, it will be very desirable to collect all the information which can be got as to the best modes of feeding, keeping, and rearing the same; and, as regards Vegetables, any information as to the best mode of cultivation.

A copy of the last Annual Report of the Acclimatisation Society of Great Britain accompanies this, and will serve to explain more completely the action and purposes of the Society.

1. Is there any quadruped, indigenous or introduced to the country in which you reside, which (having regard to the above definition of the objects in view) merits attention with a view to acclimatisation in Great Britain or

any of its dependencies? If there be any such, state whether it is attainable at a reasonable rate, and whether it is likely to bear the risk of transport.

2. Is there any such bird?
3. Is there any such fish?
4. Is there any such insect?
5. Is there any such timber tree?
6. Is there any such medicinal plant?
7. Is there any fibrous plant likely to be useful for manufacturing purposes?
8. Is there any vegetable suitable for the food of man, or for forage, or for any other useful purpose?
9. Do you know any quadruped, bird, fish, insect, tree or plant existing elsewhere, the introduction of which to the country in which you reside, would be likely to be beneficial; one of the objects of the Acclimatisation Society being to reciprocate the benefits which it receives from other countries?
10. Does any organization exist, or could it be easily called into existence, capable of undertaking the task of introduction?

Any remarks founded upon special knowledge or local information, capable of being made useful to the progress of Acclimatisation will be desirable.

Reply to His Excellency's Communication.

May it Please Your Excellency,—Herewith I have the honour to enclose the answers to the series of questions which was laid before the Council of the Acclimatisation Society by your Excellency. The papers now enclosed were drawn up in the first instance by a sub-committee, consisting of Dr. Mueller, Professor McCoy, and Dr. Madden, and were then carefully revised and amplified by the whole Council, and the Council trust that the form in which they now hand them to your Excellency will compare favourably with that of the answers of a similar nature which are now being sent into the Colonial and Foreign Office from all parts of the world.

I have the honour also, by request of the Council, to beg that your Excellency will, in forwarding these replies to the Duke of Newcastle, at the same time intimate to his Grace the strong desire of the Council to possess a complete copy of the other replies received. The Council cannot but feel that those answers will form a most interesting, and at the same time, a most trustworthy guide-book to the Acclimatisation Societies in their endeavours to extend their usefulness, and they would regret extremely if the mass of information got together at such an expense of time, and with so much effort, should not be utilized to the utmost possible extent by making common property of such information.

I have the honour to be, Sir,
Your Excellency's most obedient Servant,
EDWARD WILSON, *President.*

Answers to the foregoing Inquiries.

Question 1.—Is there any quadruped, indigenous or introduced to the country in which you reside, which merits attention with a view to acclimatisation in Great Britain or any of its dependencies? If there be any such, state whether it is attainable at a reasonable rate, and whether it is likely to bear the risk of transport.

Various *marsupiata*, from the larger species of kangaroo to the kangaroo rats, would be worth transferring from Victoria to countries of a similar

climate. Their flesh, however, with the exception of that of the bandicoot, which is superior to rabbit, is scarcely equal to that of most other game, though their skin furnishes a good kind of leather. From their peculiarity of form, and their eccentric movements, they would constitute a very interesting feature in parks; and from their speed they might furnish a valuable addition to objects of sport. The transit of these animals is attended with no great difficulty, when they are once tamed.

The porcupine anteater (*Echidna hystrix*) might be a desirable acquisition anywhere in the warmer temperate zones. Its meat is excellent. This animal may possibly prove hardy in the southern parts of Britain, as it ascends the Australian Alps in the summer season. In transport, these creatures require great attention, as during voyages they have to be fed on a milky food and eggs.

QUESTION 2.—Is there any such Bird?

Of the few which Victoria can offer, the emu (*Dromaius, Novæ Hollandiæ*, and *D. irroratus*) stands foremost as a bird desirable for naturalisation in other similar climates. The great ease with which its transit can be effected when small, the fair food which the flesh of the young bird affords, the adaptation of this bird as well to a sub-alpine as tropical clime, its contentedness with very indifferent food, its great size, its abundant oil (used by the colonists for medicinal purposes), its harmlessness, the value of its eggs, tend all to recommend it for introduction into many other countries. Its fecundity is considerable, as frequently eight to fourteen birds are raised from the same nest. It would, with care, prove hardy in British parks.

The native turkey or bustard (*Otis Australiana*) deserves every attention: it is easily kept in captivity, and is thus readily available for transit, and in size and excellence for the table is fully equal to the European bustard. It is not, however, prolific, and is therefore not very valuable in a strictly utilitarian point of view.

The Wonga-Wonga pigeon (*Leucosarcia picata*) is so large and excellent for the table, that it may be particularly recommended for transmission to other warm, temperate countries.

The mallee hen (*Leipoa occellata*) could be readily naturalised in South Africa or the South of Europe, and has lately been kept with little trouble in a domestic state, laying a large number of delicate eggs of a surprisingly large size.

Our quail, of several species, are objects sought by the sportsman; they are also excellent for the table, readily kept in confinement, and therefore may be easily conveyed into other countries.

The so-called magpies (*Gymnorhinæ*) and laughing jackass (*Dacelo gigantea*) merit, as vermin-destroying animals, introduction into other sub-tropical and warmer extra-tropical regions, and by the robust, jovial humour of their merry pleasant notes and quaint manners, would form most desirable additions to British parks.

The black swan (*Cygnus atratus*) not merely deserves attention on account of its ornamental appearance, but also for its down and for its flesh, which, when obtained from cygnets, is excellent food. Both of these can be supplied in considerable numbers.

The Cape Barren goose (*Cereopsis Novæ Hollandiæ*) is deserving of introduction into Britain and its colonies of milder climate.

Other geese and ducks, for instance, *Anseranas leucogaster*, *Anas superciliosa*, *Bernicla jubata*, *Casarca tadornoides*, *Malacorynchus membranaceus*, could no doubt be taken, with a view of naturalization, advantageously and readily to other parts of the globe; they are all good for food, and the first is very

easily domesticated, while the second breeds now readily in company with the European wild duck, which it meets in the wild state, as introduced by the Acclimatisation Society of Victoria.

QUESTION 3.—Is there any such Fish?

The so-called Murray cod or cod-perch (*Oligorus Macquariensis*) is the most important fish, which could be transferred from Australia to the fresh waters of other countries stretching through the milder parts of the extra-tropical zone. It not unfrequently is sent to the markets of a size weighing from twenty to thirty pounds, and even attains a weight of eighty or one hundred pounds, and the flesh is sufficiently good to take first or second place in the dinner *carte*. Its principal food is the smaller river crayfish (*Astacus quinquecarinatus*), but it eats the smaller fish also. There seems to be no reason why the young fish should not as readily be carried in ordinary glass globes over sea as many other fresh water fish. Supplies could be secured for this purpose with facility, owing to the ready communication we have by railway with the Murray River, or in smaller quantity from the southern rivers of Victoria, to which it has been already transferred. Some other fresh water fish of the Murray are even preferred to the cod-perch for the table, as the silver perch (*Cernua Bidyana*) and golden perch, and a few others, but they are not of great size, and perhaps not equal to many European kinds in flavour.

QUESTION 4.—Is there any such Insect?

None of the insects of Victoria are at present known to possess properties rendering them worthy of transmission to other countries, with a view to their naturalisation, although some of the *Coccei* infesting the *Acaciæ*, or common wattle trees, in great numbers, afford a fine purple dye.

QUESTION 5.—Is there any such Timber Tree?

The Victorian timber trees, with few exceptions, are not likely to bear the climate of Britain; and in the South of England and Ireland, where a few species have been acclimatised, they can only be viewed as objects of curiosity or ornament.

But in warmer regions, especially beyond the tropics, where it is of importance to raise trees in woodless districts, none could be chosen for this purpose surpassing, and but few equalling, certain species of ours in rapidity of growth. Thus in Natal, and in other countries where fuel is excessively scarce, they might be raised most readily from seeds in the utmost profusion.

In some of the lower regions and plateaus of the highlands of India our trees would be equally eligible for raising shelter plantations, and furnishing, finally, fuel and material for artisans.

The most important timber tree which we can offer is the blue gum tree (*Eucalyptus globulus*). It is most readily raised from seeds; and the seedlings, when a few months old, are easily transplanted during cool and humid weather. In rapidity of growth this tree excels perhaps all other trees of the globe; in regard to size, it must be reckoned amongst the most gigantic productions of the vegetation of the world; for durability of its timber, and its resistance against decay as well in water as underground, it is excellent, and it is eligible for most purposes where a hard and heavy wood is needed. The tree, although chiefly a natural production of humid valleys, nevertheless resists well the influence of great heat and of hot winds.

Several other *Eucalypti* are of nearly as much importance for introduction into several of the British colonies. Thus the red gum tree (*Eucalyptus rostrata*) grows also with remarkable celerity, and is recommended especially for plantations in depressed ground. Its wood is extremely durable, very suitable for underground work, piles of wharves, &c., susceptible of an excellent polish, and affords superior fuel. It is, like all other *Eucalypti*, most readily raised from seeds. *Eucalyptus amygdalina* is also a timber tree of quick growth, and besides is remarkable for the extreme abundance of volatile oil in its foliage.

The Stringy Bark Tree *(E. obliqua)* is the most to be recommended where a tree is sought for extensive plantations on barren ranges, and where a fissile wood for fencing purposes is required; it attains also gigantic dimensions, and its stem is almost invariably of a beautiful straightness. The bark furnishes material for rough paper.

The other large *Eucalypti* eligible as timber trees are *E. goniocalyx*, *E. corymboso*, *E. botryoides*, *E. Woollsii*, *E. coriacea*, *E. Leucoxydon*, *E. Gunnii*, *E. viminalis*, *E. odorata and E. persicifolia*. The last is the famous Ironbark tree, so singular for the toughness and durability of its wood.

Some *Acaciæ* of Victoria are also of great celerity of growth, amongst which *A. mollissima* is the most eligible. It is, however, neither a large nor a lasting tree, but of great value for the quick shelter it affords when raised for protection of other plantations; it yields, moreover, a gum similar to that of gum arabic, and also a good kind of tanner's bark.

The W. Australian *Acacia lophantha*, generally introduced here, is also highly suitable for the quickness of its growth and readiness with which it can be raised as a temporary shelter tree, though never attaining a large size. Of all our Acaciæ, however, the most valuable is the Blackwood tree, *Acacia melanoxylon*, on account of its beautiful furniture wood, which has been with the greatest advantage used for elegant and durable cabinet work, for railway carriages, &c. The tree attains great dimensions in fertile, especially irrigated ground, and is readily raised from seeds.

Acacia homalophylla, though but a small tree, is much sought for its dark, scented, heavy wood, well known as the Myall-wood; this plant is restricted to the desert country.

QUESTION 6.—Is there any such Medicinal Plant?

As far as known, the only plant restricted to these parts of Australia, and not merely used as a substitute for other species in the *Materia Medica*, is the Sassafras tree of Victoria and Tasmania *(Atherosperma moschatum)*. Its bark is a powerful tonic, of which the efficiency seems mainly to rest in a peculiar alkaloid; it yields also a volatile oil, of which the especial therapeutic properties have to a great extent as yet to be ascertained. The tree can, however, only be naturalized in deep, springy, forest ravines, of countries with a climate analogous to that of Tasmania and of the southern parts of Victoria.

It is, however, not to be overlooked that several *Acaciæ*, especially *A. pycnantha* and *A. mollissima* yield a copious supply of gum similar to that of gum arabic; and as both trees are of extremely easy growth, they might even on that ground deserve the attention of cultivators abroad.

The native Cypress Pine *(Callitris verrucosa)*, a tree easily and rapidly growing in sandy soil, yields a kind of Sandarach resin.

The myrtaceous trees and shrubs are all more or less rich in ethereal oil, which in many instances greatly resembles the medicinal Cajuput oil. *Eucalyptus amygdalina* has yielded nearly 4lb. of oil from 100lb. of fresh leaves, several other species yield also a large return of oil; which has proved most useful for admixture with other essential oils in the manufacture of soaps, *Melaleuca linearifolia* has furnished 1¾lb. from 100lb. of leaves and branchlets. These oils have attracted attention as not only medicinally valuable, but

also as solvents for various kinds of superior varnish resin, and for illuminating power *(vide Jurors' Report of the Victorian Exhibition of* 1861).

As medicinal products, the astringent gum-resins of various *Eucalypti* likewise deserve attention, all species exuding more or less of this substance.

There are plants in this country yielding excellent substitutes for the following drugs: Gratiola, Mezereum, Winter's Bark, Mint, Gentian, Lobelia, Althæa, &c.

Question 7.—Is there any Fibrous Plant likely to be useful for manufacturing purposes?

The *Cyperus vaginatus*, a sedge of extreme abundance in some of the humid depressions of the colony of Victoria, produces a remarkably tenacious fibre, which by the aboriginal population was once largely employed for cordage and for making their fish-nets. This plant is certainly deserving introduction into other countries.

The Australian Flax *(Linum marginale)* seems to have no claims to be introduced elsewhere in preference to that species which has been cultivated for ages, unless for its perennial duration.

Two fibrous plants introduced here appear to hold out the greatest prospect for lucrative introduction into several other regions of the globe, viz., the New Zealand flax *(Phormium tenax)*, which could be cultivated without any protection in the southern parts of Britain, and which may be grown in inundated places not readily available for other cultivation; and, secondly, the Rhea *(Bœhmeria nivea)*, from which the Chinese grass-cloth is made. The latter plant has proved quite hardy and luxuriant in Victoria. Both are most easily grown and multiplied, and ought to be naturalized in all tropical and temperate latitudes.

The fibres of *Sida pulchella*, *Brachychiton populneum*, *Pimelea axiflora*, several Stipa-grasses, although not without value to us here on the spot, are apparently not of sufficient importance to entitle their respective plants to an introduction into other countries.

Question 4.—Is there any vegetable for the food of man, or for forage, or any other useful purpose?

Of culinary vegetables indigenous to Victoria, we have three kinds of spinach. One of these *Tetragonia implexicoma* is a littoral plant, and for practical purposes similar to the well-know New Zealand spinach. It is perennial, expanding and climbing to a wide extent, and might be advantageously transferred to every sandy and rocky seashore of the globe, wherever it will prove hardy. Seeds are very seldom obtained, and hence the plant has to be exported in a living state. The second is identical with the New Zealand spinach *(Tetragonia expansa)*; it belongs not only to the Victorian sandy coast, but also to the desert. By means of seeds it can without difficulty be introduced, as is well known, into other countries; it occurs wild also on the sub-tropical east coast of Australia, and might be introduced into hot climates.

The third kind of spinach alluded to is that of *Chenopodium auricomum*. This plant is still more valuable than the *Tetragoniæ*, being more palatable and more nutritive; it grows also in tropical Australia, and will thus endure the climate of many warm parts of the globe.

Of fruit plants we have scarcely any deserving introduction elsewhere, unless perhaps the Quandang *(Santalum acuminatum)*; for although it is far inferior to the ordinary fruits commonly under cultivation, the fact of its being a desert plant, not becoming parched by Sirocco-like winds, entitles it to consideration.

Of forage plants we have some excellent grasses, well deserving of introduction abroad; thus for countries of warm climate the perennial kangaroo grass *(Anthistiria Australis)*, would be eligible, as well as *Panicum decompositum*, and several other grasses, chiefly belonging to the genera *Punicum*, *Danthonia*, and *Agrostis*, of which seeds can be obtained with ease.

An excellent tender swamp grass is *Danthonia nervosa*, and a splendid forest grass the recently discovered *Festuca dives*. For countries with a colder climate three of our taller and yet tender-leaved alpine grasses might advantageously be selected, viz., *Festuca Hookeriana*, *Danthonia robusta*, and *Hierochloe antarctica*.

A magnificent American fodder grass *(Bromus unioloides)* has become sufficiently plentiful here in cultivation to render seeds available for re-distribution.

Question 9.—Do you know any quadruped, bird, fish, insect, tree, or plant existing elsewhere, the introduction of which to the country in which you reside would be likely to be beneficial: one of the objects of the Acclimatisation Society being to reciprocate the benefits which it receives from other countries?

Quadrupeds.—Besides additional numbers of any of the valuable animals appearing in the list of those already imported by the Acclimatisation Society, such as the hog deer, Manilla deer, Axis deer, Formosa deer, Rusa deer, English hare, &c., &c., the following may be named:—

The Cape hare *(Lepus Capensis)*.

The *Lepus Americanus*.

The Chinchilla of S. America *(Chinchilla lanigera)* would be desirable for its fur, as the climate and abundance of small bulbous roots in the ground would probably suit it perfectly in the wild state.

The spring haas *(Helamys Capensis)* or leaping hare of the Cape, for sandy and stony desert tracts in the northern districts, is desired, in the hope of adding to the very scanty food to be found by the explorer or pioneer in such localities, to which the habits of the animal are well suited; its flesh would prove a welcome meal to many persons engaged in pushing the settlement of this new country.

The gazelle of the Cape is desired, as well as that of North Africa (*Gazella dorcas*), in large numbers to turn loose in the country beyond the Murray, where they would thrive well, and ultimately afford both excellent food and good sport.

The ourebi of Natal (*Scopophorus ourebi*), for grassy northern districts.

The gemsbok (*Oryx gazella*) of S. Africa is desired for sandy northern plains, as it thrives well in parched country, where little else can live, is of good size and most excellent flesh.

The oryx (*Oryx leucoryx*) of N. Africa is desired as a fine antelope, feeding on acaciæ, and appropriate to a climate like that of the north of our colony.

The eland (*Oreas canna*) of S. Africa is particularly desired, from its great size, excellent flesh, and being able to thrive without water for long periods on parched herbage; it is expected to be a boon of inestimable value to those periodically parched northern districts towards which the industry of the colony is extending.

The koodoo (*Strepsiceros kudu*) of S. Africa.

The Californian or Rocky Mountain big horn sheep (*Caprovis ammon*) for mountainous districts of Gipps Land.

The Cape sheep.

The *Cervus Canadensis* for acacia localities.

The red deer (*Cervus elaphas*), roebuck (*Capricolus capræa*), and all other kinds of deer.

The klip daas or dock rabbit (*Hyrax Capensis*) of the Cape.

Birds.—It may be mentioned generally that Victorian farmers and gardeners suffer very much from the depredations of insects, and therefore any of the soft-billed birds of Europe, or other temperate countries, are desired in unlimited numbers, particularly those which, like the robin (*Erythaca rubecula*) and hedge-sparrow (*Accentor modularis*), love the neighbourhood of man. The Acclimatisation Society of Victoria has introduced and liberated large numbers of the common sparrow from England, and the tree sparrow from China, to keep down the caterpillar, while feeding their young; and the mino (*Gracula musica*) from India, to diminish the myriads of destructive grasshoppers and small locusts; also the song-thrush, to clear away the slugs. But any additional number of these and other such birds would be very welcome. Although in all parts of the colony a great variety of ants are very troublesome, none of the ant-thrushes (*Pittæ*) of India or America have (from the difficulty of keeping them in confinement) been procured, although some of them would probably live well near our northern boundary. Our forest trees, too, are invested with very numerous larvæ in the timber, while in the whole country there is no representative of the woodpeckers appointed in other parts of the world to remedy this evil; and although the difficulty of introducing either the woodpecker or ant-thrush would be very great, still the experiment would be a very curious and important one in its effects.

The serpent-eater (*Serpentarius secretarius*), or secretary bird of the Cape, is desired for the diminution of our snakes.

The crowned pigeon (*Goura coronata*), from Java or New Guinea, has only been very sparingly introduced, and a large supply would be particularly valued of this the largest of the pigeons.

The China pheasant (*Phasianus torquatus*).

The monal (*Lopophorus Impyanus*) and all the other Himalayan pheasants are particularly desired, to be turned loose in the alpine parts of Gipps Land, where both the temperature and the great abundance of small bulbs and corms in the ground afford so nearly those natural conditions requisite for successful naturalisation of those splendid, easily-bred birds. A few of them only have been imported by the Society, including the horned and satyr tragopans (*Ceriornis Lathami* and *C. Satyr*), the monal, and two kaligee.

The *Penelope cristata* of South America. A large supply of curassows, two of which, the *Crax alector* and *C. Alberti*, as well as the *Ourax miter*, thrive well here; the two former laying regularly. These are desired, as large and excellent birds for the table.

The sand-grouse (*Pterocles*), both of India and Africa, are desired for the northern sandy districts. Any of the species of Francolins and grouse, as well as all kinds of partridges and quail in large numbers, will be desirable for some years to come.

The adjutant of India (*Leptoptilus argala*), as a scavenger.

The ostrich (*Struthis camelus*) would, no doubt thrive in our northern sandy country.

The *Cygnus nigricollis*, the black-necked swan of the west coast of South America.

To these must be added a large number of birds, introduced and partially naturalised by the Acclimatisation Society of Victoria, which are required in large numbers for many years, such as the common and gold and silver pheasants, common and red-legged partridge, peafowl, grey and black Indian partridge, any of the more highly esteemed wild geese and ducks, more especially the pintail and its allies, blackbirds, thrushes, skylarks, starlings, minos, &c.

Fish.—The *Cyprinus carpio* and *C. gobio* of Britain, the gouramie (*Osphronema alfax*) from China or Mauritius, and any other palatable pond-fish.

The salmon (*Salmo salar*), trout (*Salmo fario*), char (*Salmo salvelinus*), grayling (*Thymallus vulgaris*), and other principal river fish of Europe. Lobsters and crabs, and the better kinds of fish of European seas. In relation to this suggestion, reference may be made to the fact of several specimens of sea-fish,

consisting of the grey mullet (*Mugil capito*), as also the edible crab, having actually been imported alive from England, and the gouramie from the Mauritius.

Insects.—The *Bombyx cynthia* and *B. arrindi*, to establish a supply of coarse silk, not requiring labour to feed the worms.

The *Coccus cacti*, the cochineal insect.

Plants.—Amongst the multitude of plants which, finally, no doubt, will be extensively cultivated in Victoria, a few of the seemingly most important may be alluded to on this occasion; as some of these are evidently destined to add to the resources of this country and to aid in the support of an increasing population.

Recent experiments have shown, that the hardier varieties of cotton are in favourable localities of Victoria, producing a remunerative crop. The importation of seeds of the Peruvian tree-cotton and other hardy varieties, on which we have commenced to experiment, should therefore be maintained.

The senna plant also for practical cultivation has not yet found its way into this colony, where no doubt in suitable localities it could be grown to advantage.

On account of its large yield of mealy substance the tropical American cassava (*Tatropha manihot*) is desirable for introduction, with a view of ascertaining whether in our climate it could be cultivated to advantage, its cultivation extending to some extra-tropical countries.

The successful introduction of various species of *Cinchona*, including the valuable *Calisaya*, into various of the British possessions of India, affords the ready means of transferring to us specimens of ascertaining whether these important plants could be acclimatised in favourable mild and sheltered parts of Victoria, as seems from the mean temperature of our climate not impossible, though the *Cinchona* plants inhabit in a natural state mountain regions of the tropics.

Of grasses it would be particularly advisable to obtain for our coast and higher mountain regions the Tussock grass of the Falkland Islands (*Dactylis cæspitosa*), which has been established in the Shetland Islands, and from whence it could probably be further distributed.

The buffalo grass of North America, *Sesleria dactyloides*, would be highly acceptable.

Our colony being destitute of any pine timber of considerable dimensions, it is important to encourage the introduction of any larger species of the fir tribe. Canada might furnish us with supplies of seeds of *Pinus Canadensis*, *P. nigra*, *P. microcarpa*, *P. Strobus*; British Columbia, with *Pinus Douglassi*, *P. bracteata*, *P. nobilis*, *P. ponderosa*, *Sequoia sempervirens*; Nepaul with *Pinus Brunoniana*, *P. Pindrow*, *P. Webbiana*, *P. Deodara*, *P. excelsa*, *P. longifolia*, *P. Gerardiana*; whilst from British parks the Norway spruce (*P. albies*), the larch (*P. larix*), the silver fir (*P. picea*), and many other ornamental and highly useful pines, might be much more extensively introduced than has hitherto been the case.

Useful plants available in Britain for introduction into Australian husbandry are, among others, the mustard (*Sinapis nigra*, L.) of which the cultivation might prove highly remunerative; amongst medicinal plants, *Aconitum Napellus*, *Podophyllum peltatum* (cultivated in Britain), *Valeriana officinalis*, *Gentiana lutea*, *Colchicum autumnale*, *Crocus autumnalis*. Amongst fruit plants, various kinds of brambles; and, suitable for our higher mountains, *Vaccinium myrtillus*; also the osier willows.

By the co-operation of members of Acclimatisation Societies in various parts of the globe, many other plants could no doubt, on a larger scale, be introduced into Victoria, though they are not available in any British colony; thus, for instance, the huge pines peculiar to California, including the famous *Wellingtonia gigantea*, *Taxodium distichum*; walnuts, and also *Nelumbium luteum* of North America; the oaks of North and Central America, and of the Mediterranean, including the cork oak and the valonia oak (*Q. Juba*

and *Q. Ægilops*); for although many of those are introduced for experimental culture, they are not as yet obtainable for general distribution in this country.

It would further be desirable to transfer from the Mediterranean shores to our colony, where the climate is so similar to that of South Europe and North Africa, the various astragalus bushes, which furnish the gum tragacanth, the argan-tree (which is as yet but very scantily available here, and particularly valuable as affording in its fruit a most nutritive cattle-food and a vegetable tallow) the *Pistacia lentiscus*, which yields the mastix of commerce, some of the largest fruited varieties of olives, the bergamotte lemon, the *Papyrus antiquorum*, and the *Lawsonia*, the latter yielding an excellent dye, and being moreover valuable as a hedge plant.

From Hong Kong a copious introduction of tea seeds might be effected, the tea plant having proved well adapted to sheltered, fertile spots of Victoria; also from the same spot, the copious transmission of Povenia, Litchi, and Logan seeds.

A remarkable plant, desirable from Peru, is the *Erythroxylon coca*, furnishing the coco leaves, the stimulating properties of which are so well known.

The introduction of the varieties of *Rheum palmatum* and allied species, yielding the medicinal rhubarb root, would also need attention.

The various acacia trees, from which in North Africa and South West Asia the gum arabic is collected, could be most easily naturalised in Victoria, where yet but a few individuals of two or three of these species exist, so that seeds in quantity would be highly desirable.

It would unnecessarily extend the limits assigned to this document to enumerate all the highly useful plants which, although they have found their way more or less generally into our country, require a much wider distribution here than they have hitherto obtained. It may be suggested, however, that importations of plants or seeds of any of the more eminently useful kinds will be always acceptable in a new country like this, where forest culture is not even commenced, and where, in many districts, husbandry is as yet but imperfectly developed.

Question 10.—Does any organisation exist, or could it be easily called into existence, capable of undertaking the task of introduction?

The Acclimatisation Society of Victoria is in vigorous action, and has means for transacting any such business efficiently.

Question 11.—Any remarks founded upon special knowledge, or local information, capable of being made useful to the progress of Acclimatisation, will be desirable.

The replies to preceding questions have been sufficiently complete to prevent the necessity of an elaborate answer to this. It may be remembered, however, that the British Admiralty has lately issued instructions to commanders of Her Majesty's ships in all parts of the world to render any aid possible in the conveyance of specimens; and through such agencies the difficulties of transmission may be greatly diminished if proper opportunities be prepared for.

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ACCLIMATISATION

AND

ORNITHOLOGICAL SOCIETY

OF LONDON.

SEVENTH ANNUAL REPORT.

1867.

ACCLIMATISATION & ORNITHOLOGICAL SOCIETY.

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LONDON:

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DOCTORS' COMMONS, E.C.

RULES OF THE SOCIETY.

I.

The objects of the Society shall be the introduction, acclimatisation, and domestication of all useful or ornamental animals, birds, fishes, insects, and vegetables; the perfection, propagation, and hybridisation of races newly introduced or already domesticated;—the spread of indigenous animals, &c., from parts of the United Kingdom, where they are already known;—the procuring, whether by purchase, gift, or exchange, of animals, &c., from the British colonies and foreign countries;—the transmission of animals, &c., from England to her colonies and foreign parts, in exchange for others sent thence to the Society;—the holding of periodical meetings, and the publication of reports and transactions, for the purpose of spreading knowledge of acclimatisation, and inquiry into the causes of success or failure;—the interchange of reports, &c., with kindred associations in other parts of the world, with the view, by correspondence and mutual good offices, of giving the widest possible scope to the project of acclimatisation;—the conferring rewards, honorary or intrinsically valuable, upon seafaring men, passengers from distant countries, and others who may render valuable services to the cause of acclimatisation.

II.

The Society shall be governed by a Council of 16 members, exclusive of President, Vice-Presidents, Honorary Treasurer, and Naturalist Manager, three of whom (viz., those who have attended fewest meetings of Council during the past year) shall retire

annually, but be eligible for re-election. The Council shall have power to fill up vacancies in their number in the interval between one general meeting and another. No paid officer shall be member of the Council.

III.

The Council shall have the sole management of the affairs of the Society, and of the income and property thereof, for the uses, purposes, and objects of the Society; and shall have the sole and exclusive right of appointing paid servants, as a manager or secretary, collector, and such other officers, clerks, and labourers, and at such salaries as they may deem necessary, and of removing them if they shall think fit, and shall prescribe their respective duties. And such Council shall have power to consider and determine all matters, either directly or indirectly affecting the interests of the Society, and if they shall think fit so to do, shall bring the same under the notice of the Members of the Society, at any general or special meeting; and to make such bye-laws as they may deem necessary for the efficient management of the affairs and the promotion of the objects of the Society, and for the conduct of the business of the Council, provided the same are not repugnant to these rules; and to appoint one or more sub-committees, for any purpose contemplated by these rules; and generally to perform such acts as may be requisite to carry out the objects of the Society. And it shall be the duty of the Council to exercise the foregoing powers as occasion shall require, and to furnish reports of the proceedings at every periodical and annual meeting of the Society.

IV.

The Council shall meet during the first week of every month, unless by a requisition to the Secretary from four of its members, a more convenient time be appointed. Extraordinary meetings of Council may be summoned by a similar requisition. At any Meeting of Council *three* shall form a quorum. Notice of any change of Meeting shall be given by the Secretary to all whom it may concern.

V.

The Annual General Meeting of the Members shall be held during the first fortnight in May in each year, to receive the Report of the Council and elect one Auditor, an Hon. Treasurer, and three

Members of Council for the ensuing year. Notice of the time and place shall be sent to Members at least fourteen days previous to the Meeting, and shall be advertised in one or more of the public papers. The Council shall have the power, either of its own motion, or on the requisition of not less than Ten Members, to call a Special General Meeting.

VI.

The Annual Subscription shall be £1 1s. A Donor of £10 10s. shall be a Life Member. The Annual Subscriptions shall be due on the 1st of January in each year, or within one month of becoming a Member; but in the case of Members elected after the 1st of November, their subscription shall be good until the end of the year next ensuing. When the Subscription of any Member has not been paid on the first day of March for the current year, the Secretary shall immediately apply to the member so omitting to pay his Subscription, and if the same is not paid by the first day of April following, the Council shall have the power of removing such defaulter from the List of Members.

VII.

Persons desirous of becoming Members must be duly proposed and seconded. The names of all Candidates shall be suspended in the office of the Society for fourteen days before the day of election, after which the Council shall, at its next or any subsequent meeting, proceed to election. The Council shall have the power to elect Honorary Members of the Society, and also as Corresponding Assistant-Members (without subscription) such skilled persons as they may think likely to further the objects of the Society; but such persons shall not be entitled to vote at the General Meeting.

VIII.

The Council shall have the power of entrusting (for experiment and multiplication) to Members or other persons, the Animals, Vegetables, or any articles which are the property of the Society, under agreements to be approved of by the Council and signed by the parties.

IX.

The accounts shall be presented at the Annual General Meeting, verified by two Auditors to be appointed from the general

body of Members, one to be nominated by the Council, and the other by the General Meeting.

X.

Any Member who shall not comply with these Rules shall cease to be a Member of the Society, and shall lose all right to any of its property.

XI.

The decision of the Council shall be conclusive on any questions which may arise on the interpretation of the foregoing regulations.

EDWD. CHAS. RYLEY, *Secretary.*

REPORT OF THE COUNCIL.

The Council, in presenting their Seventh Annual Report to the members of the Acclimatisation Society, have much pleasure in announcing that notwithstanding many serious obstacles, they are now in a most favourable position to carry out the objects of the Society. The promises of aid which they have received from al parts of the world are most re-assuring, and as, in a great number of cases, these promises either have been, or are in course of being fulfilled, they hope that the ensuing year will place the Society in a position which cannot but be most satisfactory to the members. The Council regret to state that their most serious obstacle has been one which could not have been foreseen, viz., that they have unfortunately become involved in a Chancery suit against a late member of the Council. Into this, which is much to be deplored, they were forced under circumstances which are now laid before the members, and which, in the interests of the Society, left the Council no alternative. It will be remembered that on page 16 of their Sixth Annual Report, the Council stated that "the kind "promises of Mr. W. MEDHURST, and other friendly promoters "of the objects of the Society, justify the Council's hopes that "they will speedily receive their first consignment of Reeves's "and other Chinese Pheasants." This they were fully justified in doing, but as no tidings arrived of any consignment being sent, the Secretary was directed to write to Mr. MEDHURST on May 1st, 1866, in order to bring the matter to his recollection. In reply to this, a letter was received from Mr. MEDHURST, of which the following is a copy:—

"I have just received your letter dated 1st May last, and I am "surprised to observe from it that you seem to be under the "impression that I have done nothing towards redeeming the "pledge which I gave to the Society on leaving England, that I

"would assist them to the best of my ability in procuring "living specimens of the Reeves's and other rare Pheasants. "The moment that I arrived here (now fully a twelvemonth "ago) I set on foot arrangements for getting down birds from "the interior, and soon after I had the satisfaction of receiving "my first lot of birds, consisting of a few Tragopans. I at once "made preparations for forwarding the birds to Mr. J. J. STONE, "who had placed himself more directly in communication with "me on the subject just before I left home. Some of these "birds died before I could get them away; but the remainder "I despatched, per overland mail; and since then I have "continued to procure and to despatch birds as follows (including "the above-mentioned birds):

"1st lot, July 26th, 1865 . . .	3	Male Tragopans
" " " " . . .	2	Female do.
"2nd lot, September 13th, 1865 .	2	Male do.
"3rd lot, January, 27th, 1866 . .	4	Male Reeves's
" " " " . . .	2	Female do.
" " " " . . .	1	Male Tragopan
" " " " . . .	2	Female do.
" " " " . . .	1	Male, name not known
"4th lot, May 30th, 1866 . . .	2	Male Tragopans
" " " " . . .	4	Male Reeves's
" " " " . . .	8	Females do.
"5th lot, June 16th, per "Eliza "Shaw," direct Sea Ship, viâ "Cape of Good Hope, . . .	2	Male do.
	5	Female do.

"In every case of despatch, I have communicated with Mr. "STONE, and I have his letters in reply, dated up to 26th April "last, acknowledging mine, and thanking me for my endeav- "ours. The two first lots all died either here or on their way "home; of the third lot I hear from Mr. STONE that but one "has reached home safely (a male Reeves's Pheasant), and that it "has been placed in his aviary with other birds of similar "species. The fourth and fifth lots I have yet to receive "tidings of, but I am very hopeful of favourable news regard- "ing them, as every precaution was taken to hutch them

" properly, and in the one case (fourth) Mr. STONE had prepared " the P. and O. agents for their advent, whilst in the other " (the fifth) the Captain of the 'Eliza Shaw,' an able and ex- " perienced master in the China trade, gave me his promise that " he would do all he could to get the birds home alive.

" My agents are still out searching for birds, and by the " next cold weather, I confidently look forward to receiving a " further supply, not only of Tragopans and Reeves's Pheasants, " but of Lady Amherst's and other kinds.

" Meanwhile, allow me to request that you will place this " letter before the Council, so that they may satisfy themselves " that I have, at any rate, done something towards fulfilling my " promise of assistance, and that you will assure them that I " continue to take the deepest interest in the Society, and will, " with pleasure, do all that lies in my power to promote the " objects which they have at heart."

On receipt of this, inquiries were at once instituted, and it appeared that the consignments mentioned by Mr. MEDHURST had been received by a former member of the Council, who had considered them as consigned to him personally, and had deposited some of them in his own name in the collection of the Zoological Society, in the Regent's Park. On the 27th of September, 1866, the Secretary addressed a letter (of which the following is a copy) to Mr. BARTLETT, the Superintendent of Living Animals in the Zoological Society's collection, at the same time informing Mr. MEDHURST of what had taken place.

" In consequence of a letter which I have received from " China, as Secretary of the Acclimatisation Society of Great " Britain, I beg to inform you that the Chinese birds you have " received from Mr. J. J. STONE since the 26th July, 1865, " some of which you now possess on his account, viz : seven " living specimens—three males and four females—of the bar- " tailed or Reeves's Pheasants, also specimens of the Tragopan " Pheasant, are not Mr. STONE's property; those birds were sent to " him on account of the Acclimatisation Society, and consequently " are the property of that Society. I therefore beg to caution " you on behalf of the Council not to deliver the above-named " birds to Mr. STONE, or his order, as so doing might involve " you in inconvenient circumstances in the event of its becoming

" necessary to take legal proceedings for the recovery of the said " birds by the Acclimatisation Society."

On the 11th October, 1866, the Secretary received from Mr. STONE a letter of which the following is a copy :—

" Yesterday I received from the Zoological Society copy of " a letter from you, dated 27th of September, stating that " certain Pheasants deposited by me at the Zoological Gardens " are not my property, but belong to the Acclimatisation " Society, and threatening legal proceedings for the moving of " the said birds. In reply to this communication, I beg briefly " to state that it is untrue that these birds belong to your " Society, or that the Society ever paid a farthing of the cost of " them or my other birds imported by me, and in regard to " your threat of legal proceedings, I am prepared to meet the " same, and to save time and further correspondence on this " portion of your letter, the name of my solicitor is HENRY " WHITE, Esq., 7, Southampton Street, Bloomsbury. I must " express my conviction that your impertinent letter to the " Zoological Society has been written without the sanction of " the Council, for I am confident there is not a member of that " body known to me, so wanting in courtesy as to authorise such " a communication without any previous application to me.

" I request you will bring this letter before the Council at " their next meeting, and I claim from them some explanation " of the course you have adopted, and to be allowed to see the " letter from China, which has justified it."

This letter was read at a meeting of the Council specially convened for the purpose, and it was ordered that a copy of Mr MEDHURST's letter should be forwarded to Mr. STONE, and that the Secretary should in addition write as follows :—

12th October, 1866.

J. STONE, Esq.,

At a special meeting of the Council of this Society held this day, I received instructions to forward to you immediately, a copy of a letter from Mr. W. H. MEDHURST, H.B.M's Consul at Hankow, a corresponding member of this Society.

I am further instructed to send to you a copy of the resolu-

tions passed at the same meeting of Council held this day, which I accordingly forward herewith.

I am, Sir,

Your obedient servant,

B. WATERHOUSE HAWKINS.

J. J. STONE, Esq.

"At a special meeting of the Council, 12th October, 1866, "Resolved that Mr. Stone be informed that the Secetary's letter "to the Zoological Society's Manager was not intended as "threatening Mr. Stone with legal proceedings, but as furnishing "the Officers of the Zoological Society with legal grounds for "declining to part with the Pheasants without the sanction of "the Council of the Acclimatisation Society, and that the "Council does not doubt that Mr. Stone, when made acquainted "with the contents of Mr. Medhurst's letter, will see that "Mr. Medhurst, probably not being aware that Mr. Stone had "retired from the Council of this Society, was under the im-"pression that sending the birds to that gentleman was "sending, in fact, to this Society.

"Resolved further that Mr. Stone be requested to furnish "an account of any expenses which he has incurred in receiving "the birds and depositing them at the Zoological Gardens, and "that a copy of all these resolutions be sent to Mr. Stone."

This was done on October 12th, and no reply was received from Mr. STONE.

On October 15th intelligence was received of the arrival of the ship Eliza Shaw, mentioned in Mr. MEDHURST'S letter, upon which the Secretary addressed a communication to Capt. STEELE, commanding that ship, enclosing a copy of Mr. MEDHURST'S letter, and inquiring for the pheasants, to which the following answer was received:—

13, Northampton Terrace, Compton Road,
Canonbury, London, N.
October 24, 1866.

B. W. HAWKINS, Esq.,

Dear Sir,

Your favour accompanying the enclosed (which I beg to return) was handed me yesterday. Three of the seven

Pheasants put on board the "Eliza Shaw" were delivered in sound and healthy condition to Mr. STONE. One bird died five days after we left Hankow, two died during bad weather off the Cape of Good Hope, and the fourth about two days before we arrived in Channel.

I was given to understand by Mr. MEDHURST that the birds *were for the Acclimatisation Society, and thought* Mr. STONE *represented that Society when he applied for the Pheasants*, and as Mr. MEDHURST, for whom I have the highest esteem, is aware *that I would not have taken charge of the birds for any private individual*, I am willing to assist you in recovering the birds from Mr. STONE, if such can be fairly done.

Yours respectfully,

JOHN STEELE.

P.S.—I expect to leave Hankow next June (for England), and shall be most happy to take charge of seven or eight more birds for the Society. J. S.

Repeated communications having been addressed to Mr. STONE by the Society's Solicitor without effect, it was resolved at a special meeting of the Council, held November 16th, that Mr. FORD be instructed "to take requisite proceedings for the "recovery of the birds, the property of the Society, detained by "Mr. STONE."

On the 22nd and 23rd November letters were received from Mr. STONE by the Society's Solicitor, which being unsatisfactory, a Bill in Equity was filed on the 24th November, to which Mr. STONE filed his answer.

The Council are now awaiting Mr. MEDHURST's affidavit, which is expected in the course of a mail or two, and which must, as appears from the foregoing correspondence, bring this most unfortunate matter to a satisfactory issue as regards the Society.

The Council have now much pleasure in turning from the dark to the bright side of their Report, and feel that they cannot do better than by pointing in the first place to the result of their negociations with Lieutenant MARSHALL, Assistant-Commissioner, Lahore, Punjaub. In reply to a letter asking on behalf of the Society for aid in obtaining some of the birds of India, Lieu-

tenant MARSHALL, on July 10th, addressed the following most kind and satisfactory letter to the Secretary :—

Dhurumsala,
July 10th.

Dear MR. HAWKINS,

I have just received your letter, which has given me great pleasure, as I was very anxious to get into correspondence with the Society of which you are secretary. I take great interest in all branches of natural history, but have in this country studied ornithology, having had greater opportunities in that particular branch. I shall be only too proud and happy to further the wishes of the council by sending you home specimens of the Indian Game birds, as also those from the Straits, Java, Japan, China, and Australia. I started an aviary in Lahore in the public gardens on a small scale, but now Government wish me to form an Acclimatisation Society, and have given a grant to start with, it will therefore be a great help being in correspondence with you. Now with regard to the birds I can send you next January, I will get a hundred Sand Grouse, large and small ; they are what Captain Jenkins calls the "Bur-teelim ;" they are very hardy birds indeed, and will, I think, bear the journey well ; they are very game birds, and about the best eating birds to be got out here. They are principally found in the Punjaub, living in coveys on bare stony ground. The Chikore, I suppose you know, much resembles the French or Red-legged Partridge, but is a larger and hardier bird, and differently marked about the neck ; the flesh is white, and not very "gamey," but they afford excellent sport, and are very difficult to shoot. They are only found on the hills, but will stand any amount of heat or cold. I will get you a hundred specimens of these if you wish. The natives keep them in great numbers in cages for fighting purposes ; they get exceedingly tame, and very vicious. The Black Partridge, or Painted Francolin, is the next easiest bird to get. These, as I dare say you know, are exceedingly handsome birds, and found over most parts of Northern India. They would, I think too, bear the journey well, and thrive in England. In this country they are very filthy feeders, but they would not have the same opportunity at home. Here they assemble in the vicinity of

large camps, and feed on the filth; but those killed out in the jungle are very clean feeders. I can get you a hundred specimens of them. I do not know whether you would care for any of the Grey Partridges, as they do not differ from our home ones; they are simple grey, and smaller in size. You can let me know about them when you write to me next time, as also about Quail. There are three kinds, the common, the button, and the painted Quail. There is another bird I think would be a great addition to the English preserves, if it will live well at home. It can bear the cold very well. The only doubt being that, as they are migratory birds, they might pine at the season for migration; but I think they would not mind in England, as they only go up to the hill to avoid the scorching heat. They are generally hawked out here, and live principally in large mustard fields. They are very handsome birds, and stand nearly two feet high. They have beautiful black and white plumes on the side of their neck, which they can elevate or depress at pleasure. Out here they are called the "O'Barah." I cannot quite make out what the real English name is. They are a small species of Bustard. I got 35 specimens last cold weather, which were transmitted home to Germany I believe. I sent them to Calcutta, to a bird-fancier there, who is an agent of mine. I will get as many as I can of them. I may also be able to get some of the large Bustards. I only got one last year; but I dare say several more may be got with a little trouble. I will write to Sirsa, where they breed, and hope the result may be successful. I think I have now enumerated all the Game Birds of the Plains, at least the land ones. You did not mention any Water Birds. Would you like any? There are innumerable varieties of Ducks: the Wild Goose, Pelicans, Flamingoes, Coolans, Cranes, and Waders of all sorts. Pheasants are only found in the Hills, and there is a great demand for them. I hope this year to be able to get a good batch. It is necessary to get a large number, as they are delicate birds, and often die whilst being transmitted. I have sent an advance of £10 to one hill station, and here, where I am staying for a few days, I have made arrangements for all that can be got to be secured for me. At present they are all up in the snow, and do not come near the lower ranges till

November. I will try to get as many as I can. There are the Manal or Impeyan Pheasant, the Argus (of which there are two varieties, they are more difficult to procure), the Kaleege Pheasant, the Chear, the Indian Silver Pheasant, and the Snow, one which is very hard to get. As regards the foreign Pheasants, my agent in Calcutta, who goes to the Straits once a year, will get the varieties procurable there—the Peacock-Eyed, the Fire-Backed, the Gold and Silver Pheasants, and others, whose names I will give you next mail on reference to my books. There are also the Jungle fowl, the Cotton-feathered fowls, and Bantams. Do you wish for any of these? I have never seen the Cotton-feathered fowls at home. I do not know, therefore, whether you have them or not. Do you require any other birds besides game ones? because I shall be happy to get any other kinds you may wish for—varieties of the Pigeon, Peacock, Parrots, and others. I have by me stuffed specimens of all the Hill Pheasants, which I shall be happy to send you if you like. I do not know the rules of your Society, but if I could be made a member, or an honorary one, I should esteem it a great honour. I will write to you again shortly.

Believe me, yours truly,
C. H. J. MARSHALL, Lt.,
Assistant Commissioner.

A remittance was immediately forwarded to him, with a request that he would employ it as advantageously as possible for the Society. On February 13th, the Secretary received the following most gratifying letter from Lieut. MARSHALL:

Lahore, December 23rd, 1866.

My dear Mr. HAWKINS,

The collection of birds is now rapidly increasing; I have fourteen of the "O'Barah" in capital health; six Goggle-Eyed Plovers, a small kind of "O'Barah," twenty Black Partridges, sixty Sand Grouse large and small, eight Coolans, beautiful eating birds, ten black and white birds about 3ft. 6in. high, red legs and bills, something like Storks, for the ornamental waters very tame. Two bar headed Geese, and twenty Manals, and a Snow Pheasant. I am getting the cages made, and shall, I

think, despatch the collection about the end of January, also the two Java Peacocks.

Yours truly,
C. H. J. MARSHALL.

And the Council confidently hope that by the time this report is in the hands of the Members, they will be able to congratulate the Society on the safe arrival of this, the most valuable and interesting consignment ever received by them. The Council cannot refrain from calling attention to the handsome way in which Lieut. MARSHALL has responded to the wishes of the Society, and they feel that in electing him an Honorary and Corresponding Member, they have but expressed the feelings of the Society generally.

The Council have to report a present from the Hon. GRANTLEY F. BERKELEY, of two pairs of Teal and a beautiful male specimen of the Eider Duck so seldom seen in this country. These birds are now on the water in the St. James's Park.

The Council have to report the arrival from the Acclimatisation Society of Natal of a consignment consisting of two Lemurs, and two Cape Partridges (survivors of six). The Lemurs were presented to the Zoological Society, and the Partridges unfortunately died, being unable to stand the exceptional severity of the climate; also from J. W. MALCOLM, Esq., M.P., of a pair of Wattle Cranes, from South Africa, which had been imported for him by W. BAILEY, Esq., of Hull.

These were exchanged with the Zoological Society for various birds. Advices have been received from the Acclimatisation Society of Queensland announcing the despatch, per "Queen of the Colonies," of a black Cockatoo, a Kangaroo, and a case of Zebra Doves, which are hourly expected.*

A letter has been received from J. COSTEKER, ESQ., of the Phillipine Islands, offering to procure for the Society a variety of rare Pigeons, indigenous to that locality. This offer has been gratefully accepted.

The Council solicit the kind co-operation of members who may visit Norway, in their endeavours to procure and import

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* Since arrived.

the Hjerper or Gelinotte, which has hitherto baffled their utmost endeavours to introduce it, notwithstanding they have offered rewards and used every means in their power.

Since the last Annual Meeting the Society has acquired by purchase—

2 pairs of Cereopsis Geese
1 pair of Whistling Ducks
1 pair of Mandarin Ducks
1 pair of Curassows
1 pair of Prairie Grouse
5 pairs of European Sand Grouse
2 pairs of Garganey Teal
1 pair of Shovellers
2 pairs of Tufted Ducks.

Received in Exchange:

1 Magellan Goose
1 pair of Summer Ducks
1 pair of Bahama Ducks
2 Female Sonnerat Jungle Fowl
1 pair of Jungle Fowl (Bankiva)
1 Pea Fowl
3 Pheasants
1 pair of Crested Pigeons.

Sold to Members:

5 Black Swans
3 Egyptian Geese
5 pairs of European Sand Grouse
2 Hybrid Geese
2 Buenos Ayres Ducks.

It having become apparent to the Council that some alteration was required in the management of the affairs of the Society, a Sub-committee was appointed on the 8th February last to inquire into the working and financial prospects of the Society. This Sub-committee having met several times, presented to the Council the following recommendations:

I. That Mr. Waterhouse Hawkins having taken into consideration the circumstances of the Society, and expressed to

this Committee his willingness and intention of placing his resignation in the hands of the Council, such resignation be accepted.

Resolved—

II. That it is unadvisable to continue to pay the sum of £150, as the salary of the paid officer; such an amount being neither required nor justified by the circumstances of the Society.

III. That it is inexpedient that the paid officer of the Society should have a seat in the Council.

IV. That a Sub-committee be appointed to select a paid officer to attend three days in the week, and to discharge the entire duties of Secretary, under the direction of the Council, at a salary of one guinea per week.

V. That it is expedient that the office at the Horticultural Gardens be given up as soon as possible, and that the offices be concentrated at the cottage in St. James's Park.

VI. That a Sub-committee be formed to carry out this concentration, which your Committee believe will be more economical and convenient than the present arrangement.

VII. That as there appears to be a number of birds which might be advantageously disposed of, your Committee recommend that the said birds be at once offered for sale to members, and if not required by them to be disposed of in the public markets.

VIII. That communications be made from time to time by the Secretary to the *Land and Water* paper, on such subjects as the Council shall direct.

These recommendations having been adopted by the Council, the Sub-committee was requested to carry out the proposed alterations, and in consequence they accepted the resignation of Mr. Hawkins, and appointed Mr. Edward Charles Ryley to be Secretary, provisionally, until the Annual General Meeting.

It not having been found expedient that the offices at South Kensington should be entirely given up at present, it was determined to retain them at least until Christmas next, and the Sub-committee have entered into satisfactory arrangements for their occupation in the meantime, the business of the Society having been entirely removed to their cottage in St. James's

Park. The proceedings of the Sub-Committee with respect to the sale of the surplus stock, are recorded at another page.

The Society is now in constant communication with the *Land and Water* journal, and the Council hope that the accounts of the Society's progress which will from time to time appear, will be entirely satisfactory to the members.

The Council have received from Mr. NETTLE a letter on the subject of the introduction of the Black Basse, from Canada.

The Council having communicated with H.M. Chief Commissioner of Works, offering if Aviaries were constructed in the Parks, to keep them stocked with birds, were informed in reply, that the estimates for the current year having gone in, the department was not disposed to go to the expense of erecting the Aviaries.

The Council have much pleasure in announcing that Mr. J. K. LORD, F.Z.S., has kindly undertaken to obtain for the Society, in America, eggs of the following birds to be hatched there, and reared tame, in order better to stand the confinement during transport:

Prairie Fowl
Canada Grouse or Spruce Partridge
Ruffed Grouse
Virginian Quail
Ducks of various kinds.
Hazalhuhn

It was resolved by the Council, that the thanks of the Society be offered to the Zoological Society of London, the Acclimatisation Societies of Natal and Queensland, and to CHARLES PENRUDDOCK, W. H. MEDHURST, J. COSTEKER, and J. THRING, Esquires, and to Lieutenant MARSHALL of Lahore, for their zeal in forwarding the objects of the Society, and the valuable assistance they have rendered.

THE JAPANESE MULBERRY-LEAF-EATING SILKWORM.

Members are informed that some of these are just ready for distribution, and may be obtained on application to the Secretary, at the Cottage, St. James's Park.

Gentlemen,

Having undertaken the charge of the Fish-hatching department of the Acclimatisation Society, I beg now to send in my report.

Eggs and Fry of *Salmonidæ* have been distributed as follows :—

GREAT LAKE TROUT.

General Seymour, for Her Majesty the Queen, to stock the Obelisk Pond in Windsor Great Park.
His Grace the Duke of Marlborough, for Blenheim Lake.
Matthew Wilson, Esq., Ablington Manor, Fairford.
Amounting altogether to 3,700.

SALMON.

Of these, I have distributed, in the form of eggs or fry, to the following :—

The Stour Fishery Association, per Montague Kingsford, Esq., Hon. Secretary, Canterbury.
Col. Anstruther.
The Hon. Grantley Berkeley.
Lady Dorothy Nevill.
Col. Napier Sturt, M.P.
Col. Henderson, R.E.
Thames Angling Preservation Society.
L. Majendie, Esq.
— Hibberd, Esq.
C. Hambro, Esq.
Rev. E. T. Bowden.
W. Baker, Esq.
— Alington, Esq.
Dr. Holdsworth.
Captain Rooke.
C. Moger, Esq.
— Leech, Esq.
Rev. — Arkwright.
Lord Walsingham.

The Thames Angling Preservation Society, for their ponds at Sunbury, per S. Ponder, Esq., Hampton.
C. Hambro, Esq.
C. Penruddock, Esq.
George Dowker, Esq.
J. Moore, Esq.
Liverpool Museum.
Rev. J. C. Thring.
S. Barker, Esq.

Amounting altogether to 15,450 Salmon.

TROUT AND SALMON TROUT

I have distributed as follows :—

The Lord Bishop of Oxford.
His Grace the Duke of Marlborough.
The Earl of Portsmouth.
The Earl of Mountcharles.
— Charrington, Esq.
Mrs. Hibbert.
— Blackmore Esq.
J. H. Hoare, Esq.
F. Hatton, Esq.
The Andover Angling Club.
Messrs. Gilson and Quelch.

Amounting altogether to 11,025 Trout and Salmon Trout.

The total number of eggs and fry thus distributed by myself has been :—

Salmon.....	15,450
Trout	11,025
Great Lake Trout...	3,700
	30,175

These eggs, &c., have been distributed in various numbers, from 50 up to 10,000.

The largest number of Salmon have been sent to the river Stour (Canterbury), and there are great hopes that this river will eventually become stocked with Salmon.

Most of the smaller lots I have distributed to gentlemen who are anxious to commence the art of Fish-culture.

One of the gentlemen receiving fish in this manner has presented a donation of £5 to the Society; and in several instances gentlemen thus receiving fish have become members of it.

For the eggs thus distributed by myself, the Society is under obligations to the French Government Fish-hatching Establishment at Hunningue, who have sent me a considerable number of eggs, and also to various gentlemen whose names I have given to the Secretary, who has kindly given me leave to take eggs from their preserves; and I should feel obliged to you to request the Secretary to write and thank them for their kindness.

The authorities of the Science and Art Department at South Kensington having instructed me to exhibit the process of Fish Culture at the Royal Horticultural Gardens, South Kensington, I have done so for the last three years.

In the summers of 1865 and 1866, I have experienced very heavy losses of young fish, I have, therefore, during the year 1866-7, distributed many fish to the members of the Acclimatisation Society, reserving, however, quite enough in the troughs, at the Horticultural Gardens, to show the process.

I beg, herewith, to enclose balance-sheets of accounts.

FRANK BUCKLAND, M.A.

May, 1867.

EDWD. CHAS. RYLEY, *Sec.*

ATTENDANCES OF MEMBERS OF COUNCIL FOR THE YEAR ENDING MAY, 1867.

Arden, R. E., Esq.	8
Chester, Harry, Esq.	8
Crichton, A. W., Esq.	3
Gillbanks, Jackson, Esq.	2
Grant, Captain	2
Hambro, Charles, Esq.	1
Hancock, H. J. B., Esq.	6
Hudson, Colonel	0
Kaye, J., Esq.	1
Morgan, W. V., Esq.	7
Page, Rev. Cyril	8
Scovell, G., Esq.	5
Sheridan, R. B., Esq.	0
Sturt, Lieutenant-Colonel Napier	4
Tredegar, Lord	1

DONORS.

	£	s.	d.
Amherst, W. A. Tyssen, Esq., Didlington Park, Brandon, Norfolk	5	5	0
Biggs, Dr.	1	0	0
Butcher, R. M. Esq., 22, Compton-terrace, Highbury, N.	1	1	0
Cloquet, Mons. Jules, 21, Place Vendome, Paris	5	0	0
Coutts, Miss Burdett, Holly Lodge, Highgate, N.	500	0	0
Gurney, Samuel, Esq., M.P., 25, Prince's-gate, S.W.	1	0	0
Hall, Marshall, Esq., Blackland's-park, Calne, Wilts	1	1	0
Kingsford, Montague, Esq., Littleborne, near Wingham, Kent	5	5	0
Leconfield, Lord, Petworth-house, Sussex	10	0	0
Northwick, Lord, Northwick-park, Moreton-in-the-Marsh	1	0	0
Scott, W., Esq., Messrs. Jones & Co., York-street, Manchester	5	0	0
Walsingham, Lord, 23, Arlington-street, Piccadilly, S.W.; Merton Hall, Thetford, Norfolk	10	0	0
Youl, J. A., Esq., Waratah-house, Clapham-park, S.	1	1	0

HONORARY & CORRESPONDING MEMBERS.

Ackland, J. B., Esq.	Canterbury, New Zealand.
Bennett, Dr.	Sydney, Australia.
Bhau Daji, Dr.	Hon. Sec. Zoological and Acclimatisation Society, Bombay.
Blyth, E. S., Esq.	Calcutta.
Buckland, J. W., Esq.	24, East India Chambers, Leadenhall-street, E.C. (Corresponding Assistant Member).
Dering, Henry B., Esq.	The Embassy, Berne, Switzerland.
Eagles, Rev. Charles L.	Longtown Vicarage, Abergavenny.
Fitzgerald, E., Esq.	New Zealand.
Fletcher, John, Esq., Brigade Major	St. John's, Lower Canada.
Hall, Fitz-Edward, Esq.	India Office, Cannon-row, Westminster.
Hardy, Capt. C. (R.A.)	Halifax, Nova Scotia.
Hornby, Sir Edmund, Judge of the Supreme Court of China and Japan	Shanghai, China.
Lakeman, Sir Stephen, Bart.	Kopacheni, Moldo, Wallachia.
Layard, Austen H., Esq., D.C.L., M.P.	130, Piccadilly, W.
Leconfield, Lord	Petworth House, Sussex.
Lees, The Hon. J. C.	Nassau, New Providence, Bahamas.
Marshall, C. H. T. Lieutenant	Lahore, Punjaub, India.
Medhurst, W., Esq., H. B. M. Consul	Hankow, China.
Mullick, Baboo Rajendro	Calcutta.
J. Boucher de Crevecœur de Perthes M.	Abbeville, France.
Petherick, H. B. M. Consul	Khartum, Soudan White Nile.
St. Hilaire, M. Albert Geoffrey	Jardin Zoologique d'Acclimatation (Bois de Boulogne).
Stevenson, F. T., Esq.	Montreal, Canada.
Temple, The Chief Justice	The Mauritius.
Thompson, Edward S. S., Esq.	Hamslade Estate, Ootacamund, Neilgherries.
Wise, Capt. (2nd West Indian Regiment	Barbadoes.
Wilson, E., Esq.	Melbourne, Australia.

LIFE MEMBERS.

* Vice-Presidents. † Members of Council.

Abinger, Lord, Abinger Hall, Dorking, Surrey.
Argyll, Duke of, Campden Hill, Kensington, W.; Inverary, Argylshire.
Arkwright, John H., Esq., Hampton Court, Leominster.
Baker, W. R., Esq., Bayfordbury, Herts.
Baker, S. W., Esq., Hanson and Co., Constantinople.
Barton, John Hope, Esq., Stapleton Park, Pontefract.
Basset, John Francis, Esq., Tehidy Park, Roskrow, Cornwall.
Boston, Lord, 4, Belgrave-square, S.W.
Brodie, Walter, Esq., 13, Delamere-terrace, Hyde-park, W.
Browning, Henry, Esq., F.R.G.S., 72, Grosvenor-street, Grosvenor-square, W.
Brownlow, Lord, Ashridge, Great Berkhampstead.
Buccleuch, The Duke of, Montague House, Whitehall, S.W.; Broughton House, near Kettering.
Buchanan, Colonel, Drumpellier, N.B.
*Burr, Higford, Esq., 23, Eaton-place, S.W.; Aldermaston Park, Reading.
Burrell, Sir Percy, Bart., M.P., Knepp Castle, Horsham, Sussex.
Buxton, Sir Robert, Bart., Shadwell Court, Thetford.
Calthorpe, The Hon., F.H.N.G., M.P., 33, Grosvenor-square, W.
Chamberlayne, Thomas, Esq., Cranbury Park, Winchester.
Chantrey, Lady, Claridge's Hotel, Brook-street, W.
Clermont, Lord, 44, Brook-street, W.; Ravensdale Park, Newry. Ireland.
Cockburn, N., Esq.
Cooper, Sir Daniel, Bart., 20, Prince's-gardens, W.
Coutts, Miss Burdett, Holly Lodge, Highgate, N.
Craven, The Earl of, Combe Abbey, Coventry; Hamstead and Ashdown Parks, Lambourne, Berks.
Crawford, J. A., Esq., 15, Theatre-road, Calcutta (Agents, Messrs. Crawford, Colvin and Co., 71, Old Broad street, E.C.)
*Damer, Capt. S. Dawson, 2, Chapel-street, Grosvenor-square, S. W.

Dell, William, Esq., The Brewery, Castle street, Long-acre, W.C.
Denison, Colonel Charles, Senior United Service Club, Pall-mall, S.W.
Eden, The Hon. William George, Doncaster.
Egerton (of Tatton), The Lord, 7, St. James's-square, S.W.; Tatton Park, Knutsford, Cheshire.
Elliott, John Bardoe Bowes, Esq., 26, Palmeira-square, Brighton.
Erskine, Miss, 29, Bryanstone-square, W.
Fenwick, Henry, Esq., M.P., Southill, Chester-le-street, Durham.
Fitzgerald, Gerald, Esq., Army and Navy Club, S.W.
Fleming, J., Esq., 26, Queen's-gate, W.
Fortescue, Earl, 17, Bruton-street, Berkeley-square, W.
Fortescue, The Hon. D. F., M.P., Hertford-street, May Fair, W.
*Gage, The Viscount, 4, Whitehall-yard, S.W.; Firle-place, Sussex.
Glyn, Sir Richard, Bart., Army and Navy Club, S.W.
Grant, Capt. Fras. Wm., Army and Navy Club, S.W.; Monymusk, Aberdeen, N.B.
Gregson, Saml. Leigh, Esq., Toxteth Park, Liverpool.
Hall, A. W., Esq., Dunstew House, Deddington, Oxon.
Hambro, Charles, Esq., 14, Cavendish-square, W.; Milton Abbey, Blandford, Dorset.
Hill, Viscount, Hawkstone Park and Hardwick Grange, Shrewsbury.
Hunt, James, Esq., Clapham-common, S.
Jones, B. Heywood, Esq., Lark-hill, Liverpool.
Langton, W. H. P. Gore, Esq, M.P., 12, Grosvenor-square, W.; Newton Park, Bath.
Le Feuvre, Rev. P., Oak Walk, Jersey.
Leslie, Col., M.P., 43, Berkeley-square, W.
Mac Viccar, Duncan, Esq., Abercromby-square, Liverpool.
Malcolm, Capt. E. D., R.E., 7, Great Stanhope-street, May-fair, W.
Malcolm, John, Esq. (of Poltallock), 7, Great Stanhope-street, May-fair, W.
Malcolm, W., Esq., Glenmoray, N.B.
Marjoribanks, D. C., Esq., M.P., 29, Upper Brook-street, W.
†Morgan, W. Vaughan, Esq., Lindon House, Chiswick, W.
Morrison, Walter, Esq., M.P., Malham Tarn, Skipton, Yorkshire.
Moscrop, E. H., Esq., 22, St. George's-square, Pimlico, S.W.
Newdigate, Lieut.-Col. Francis W., Byrkley Lodge, near Burton-upon-Trent.
Nix, Edward Ward, Esq., 77, Lombard-street, E.C.
Northwick, Lord, Northwick Park, Morton-in-the-Marsh, Gloucestershire.
†Oxford, the Right Rev. the Lord Bishop of, 26, Pall-mall, S.W.; Cuddesden Palace, Wheatley, Oxon.

Parr, J. Charlton, Esq., Grappenhall Heyes, Warrington.
Peek, H. W., Esq., Wimbledon House, Wimbledon, S.W.
Pell, Lawrence, Esq., 4, St. James's-road, Liverpool.
Penruddock, Charles, Esq., Compton-park, Salisbury.
Royds, Rev. J., Heysham, near Lancaster.
†Scott, David, Esq., M.D., Umballah, East Indies.
Scott, Sir Claude E., Bart., 29, Bruton-street, W.
Silver, S. W., Esq., Norwood Lodge, near Streatham Common, S.
Simonds, Henry John, Esq., Reading.
Skrine, Henry Duncan, Warleigh, near Bath.
Smith, Martin Tucker, Esq., M.P., 13, Upper Belgrave-square, S.W.
Smith, William H., Esq., 1, Hyde Park-street, W.
Sotheby, Mrs. S. Leigh, 2, Park Villas, Belvedere, Kent.
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LIST OF BIRDS LAYING AND SITTING.

Black Swan	Sitting.
Bean Goose	Do.
White Fronted Do.	Do.
White Chinese Do.	Do.
Hybrid Bernacle, and Canadian Do.	Do.
Hybrid, Chinese, and Common Do.	Do.
Gadwall	Do.
Widgeon	Do.
Buenos Ayres Ducks	Do.
Half-bred Call Ducks	Do. and young.
Golden Pheasant	Eggs under hen.
Silver Do.	Laid six eggs.
Purple Crested Kaleege	Laid 4 eggs—under hen.
Common Pheasant	Laying, and eggs under hen.
Carolina Ducks	Do.
Bankhiva Jungle Fowl	4 young ones.
Hybrid Jungle Fowl	Sitting.
Brown Chinese Goose	Do.
Egyptian Goose	Do.
Sonnerat Jungle Fowl	Laying and under hen.

ACCLIMATISATION AND ORNITHOLOGICAL SOCIETY.

Balance Sheet for the Year Ending April 30th, 1867.

RECEIPTS.

	£	s.	d.
Balance at Bankers	175	2	8
Ornithological Society	119	2	0
Recoup Belgian Society for Black Swans	3	0	0
Sale of Chinese Sheep	0	15	8
Donations and Subscriptions	236	2	0
Postage Stamps	0	0	10
	£534	3	2

PAYMENTS.

	£	s.	d.
Salaries	206	6	8
Office Expenditure	92	13	10
Printing, &c.	49	14	6
Rents	14	5	0
Fish Culture	23	13	3
Birds and Cages	82	15	0
Food	8	0	2
Sundries	2	12	2
Balance in hand	54	2	3
	£534	3	2

May 13, 1867.

I have this day examined the accounts and vouchers of the ACCLIMATISATION AND ORNITHOLOGICAL SOCIETY, and I certify the same to be correct.

HENRY HANCOCK, AUDITOR.

ACCLIMATISATION

AND

ORNITHOLOGICAL SOCIETY

OF LONDON.

EIGHTH ANNUAL REPORT.

1868.

*** *The Aviaries, &c., of the Society, in St. James's Park, can be viewed by Members and their Friends Daily, from* 11 A.M. *until dusk, on application to* MR. ALLEN, *the Head Keeper, at the Cottage.*


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RULES OF THE SOCIETY.

I.

The objects of the Society shall be the introduction, acclimatisation, and domestication of all useful or ornamental animals, birds, fishes, insects, and vegetables; the perfection, propagation, and hybridisation of races newly introduced or already domesticated;—the spread of indigenous animals, &c., from parts of the United Kingdom, where they are already known;—the procuring, whether by purchase, gift, or exchange, of animals, &c., from the British colonies and foreign countries;—the transmission of animals, &c., from England to her colonies and foreign parts, in exchange for others sent thence to the Society;—the holding of periodical meetings, and the publication of reports and transactions, for the purpose of spreading knowledge of acclimatisation, and inquiry into the causes of success or failure;—the interchange of reports, &c., with kindred associations in other parts of the world, with the view, by correspondence and mutual good offices, of giving the widest possible scope to the project of acclimatisation;—the conferring rewards, honorary or intrinsically valuable, upon seafaring men, passengers from distant countries, and others who may render valuable services to the cause of acclimatisation.

II.

The Society shall be governed by a Council of 16 members, exclusive of President, Vice-Presidents, Honorary Treasurer, and Naturalist Manager, three of whom (viz., those who have attended fewest meetings of Council during the past year) shall retire

annually, but be eligible for re-election. The Council shall have power to fill up vacancies in their number in the interval between one general meeting and another. No paid officer shall be member of the Council.

III.

The Council shall have the sole management of the affairs of the Society, and of the income and property thereof, for the uses, purposes, and objects of the Society; and shall have the sole and exclusive right of appointing paid servants, as a manager or secretary, collector, and such other officers, clerks, and labourers, and at such salaries as they may deem necessary, and of removing them if they shall think fit, and shall prescribe their respective duties. And such Council shall have power to consider and determine all matters, either directly or indirectly affecting the interests of the Society, and if they shall think fit so to do, shall bring the same under the notice of the Members of the Society, at any general or special meeting; and to make such bye-laws as they may deem necessary for the efficient management of the affairs and the promotion of the objects of the Society, and for the conduct of the business of the Council, provided the same are not repugnant to these rules; and to appoint one or more sub-committees, for any purpose contemplated by these rules; and generally to perform such acts as may be requisite to carry out the objects of the Society. And it shall be the duty of the Council to exercise the foregoing powers as occasion shall require, and to furnish reports of the proceedings at every periodical and annual meeting of the Society.

IV.

The Council shall meet during the first week of every month, unless by a requisition to the secretary from four of its members, a more convenient time be appointed. Extraordinary meetings of Council may be summoned by a similar requisition. At any Meeting of Council *three* shall form a quorum. Notice of any change of Meeting shall be given by the Secretary to all whom it may concern.

V.

The Annual General meeting of the Members shall be held during the first fortnight in May in each year, to receive the Report of the Council and elect one Auditor, an Hon. Treasurer,

and three Members of Council for the ensuing year. Notice of the time and place shall be sent to Members at least fourteen days previous to the Meeting, and shall be advertised in one or more of the public papers. The Council shall have the power, either of its own motion, or on the requisition of not less than Ten Members, to call a Special General Meeting.

VI.

The Annual Subscription shall be £1 1s. A Donor of £10 10s. shall be a Life Member. The Annual Subscriptions shall be due on the 1st of January in each year, or within one month of becoming a Member; but in the case of Members elected after the 1st of November, their subscriptions shall be good until the end of the year next ensuing. When the Subscription of any Member has not been paid on the first day of March for the current year, the Secretary shall immediately apply to the member so omitting to pay his Subscription, and if the same is not paid by the first day of April following, the Council shall have the power of removing such defaulter from the List of Members.

VII.

Persons desirous of becoming members must be duly proposed and seconded. The names of all candidates shall be suspended in the office of the Society for fourteen days before the day of election, after which the Council shall, at its next or any subsequent meeting, proceed to election. The Council shall have the power to elect Honorary Members of the Society, and also as Corresponding Assistant-Members (without subscription) such skilled persons as they may think likely to further the objects of the Society; but such persons shall not be entitled to vote at the General Meeting.

VIII.

The Council shall have the power of entrusting (for experiment and multiplication) to Members or other persons, the Animals, Vegetables, or any articles which are the property of the Society, under agreements to be approved of by the Council and signed by the parties.

IX.

The accounts shall be presented at the Annual General Meeting, verified by two Auditors to be appointed from the general body of

Members, one to be nominated by the Council, and the other by the General Meeting.

X.

Any Member who shall not comply with these Rules shall cease to be a Member of the Society, and shall lose all right to any of its property.

XI.

The decision of the Council shall be conclusive on any questions which may arise on the interpretation of the foregoing regulations.

EDWD. CIAS. RYLEY, *Secretary.*

REPORT OF THE COUNCIL.

In presenting to the members of the Society this their Eighth Annual Report, the Council regret that they are obliged to announce a most unfortunate and unlooked-for termination to the Law Suit which was alluded to, and the circumstances of which were fully laid before the members, in the Report of last year. The Council feel that it would be superfluous to offer any remarks upon this subject, further than to express their regret, that those data on which they relied, and, as they still feel, were justified in relying, were so perverted as to lead to an adverse judgment.

The Council regret that they are compelled to call the attention of the members to the very large number of subscriptions now in arrear, and to remind them that it is impossible with the extremely limited means at the Council's disposal, to carry out the objects of the Society, unless members observe greater punctuality in their payments.

It is with great pleasure that the Council are able to state that, notwithstanding these drawbacks, their operations during the past year have been on the whole satisfactory, and that at no time during the existence of the Society has so much progress been made. They would especially direct attention to the relations now established with Northern India, Northern China, Japan, and Canada, from all of which territories consignments are now in course of transmission; and to the undertaking of the Society to supply British fish to the waters of Portugal.

Although they are sorry to have to lay before the Society a long list of failures, they feel that they are of that kind which must ultimately lead, and in some cases have already led, to success, and that they are inseparable from the necessarily experimental nature of such an undertaking.

In their last Report, the Council mentioned that a consignment was expected from Lieut. MARSHALL, of Lahore, who so kindly

undertook to assist the Society in its endeavour to obtain the birds of Northern India. The bad fortune which attended this consignment will be best understood on reference to the following tabular statement, which will also give an idea of the many difficulties against which the Society has to strive.

The column No. 1, shows the number of birds despatched from Lahore. No. 2, the number which reached Mr. COWLEY, who kindly undertook the charge of them at Calcutta, with his remarks on their condition. No. 3, the number of arrivals in England.

	1.	2.	Remarks.	3.	Total loss.
Sand Grouse	80	70	Healthy.	15	65
Ou Barah	40	9	Poor.	0	40
Black Francolin . . .	40	27	Do.	4	36
Cranes	3	2	Healthy.	2	1
Hayes' Partridges . . .	4	4	Very healthy.	4	0
Impeyan Pheasants . .	8	7	Poor.	0	8
Tragopans	12	4	Do.	0	12
Wild Ducks	21	8	Healthy.	5	16
Snow Cock	1	1	Ill.	0	1
Chukkur	3	3	Poor.	2	1

The above statement shows how great was the loss even between Lahore and Calcutta, and will afford a fair example of the number of failures necessitated by one success. Owing to unforeseen delays, the birds were not sent from Lahore until too late in the year, when the breeding season had almost commenced, this being the most difficult and dangerous time for the transport of birds, and accounting in a great degree for the heavy loss sustained: the Overland Route too, by which they were transmitted has proved ineligible for the transport of large consignments, in spite of the facilities kindly afforded to the Society by the Peninsular and Oriental Steam Navigation Company, and the attention paid to the birds by the man in charge. Owing to the very heavy loss sustained, the P. and O. Company most handsomely deducted the sum of £15 from the freight charges. The Council desire here, as well as further on, to express their gratitude to Lieut. MARSHALL, for his most kind and indefatigable assistance, which nothing but the most unforeseen and untoward circumstances has prevented being a grand success.

Since the communication by the Council to Mr. Cowley of the unfortunate result of this shipment, he has written under date July, 1867, stating that he has advertised for birds, to be delivered in Calcutta in good condition, so as to avoid the risk of the inland journey; with what success remains to be seen. The next consignment will be sent *viâ* the Cape, when it is hoped that the birds, not being so much moved about as by the Overland Route, and also being under the charge of the same man during the entire voyage, will stand the journey better.

The Council have received a communication from Lieut. Marshall, bearing date June, 1867, in which he states that he has again commenced collecting for the Society, and intends, taking advantage of last year's experience, to obtain specimens of the painted Francolin, Sandgrouse, Hayes' Partridge, Rain Quail, and Ou Barah. In the same letter he states that a most advantageous market is to be found at Calcutta for White Swans, Peafowl, Pigeons, and Poultry, and in consequence of this advice, the Council determined to send out a shipment of these birds to Lieut. Marshall, for disposal. Applications were made to the Lord Chamberlain and to the Lord Mayor of London for assistance in procuring Swans, and Her Majesty was graciously pleased to order six pairs to be placed at the disposal of the Society. The Council were referred by the Lord Mayor to the Dyers' and Vintners' Companies, to whom applications were made, but from neither of whom was any answer received. Arrangements were made with Messrs. Smith, Fleming, and Co., who most handsomely offered to convey them free of charge to Calcutta, but owing to the Swans not being delivered until a week after they had been promised, the ship sailed without them. However, on February 25th, five pairs of Swans and two pairs of white Peafowl were shipped per "Knight Companion," and on March 12th, two pairs of Swans, one pair of white Peafowl, and eight pairs of white Pigeons per "Mooresfort," both belonging to Messrs. Moore and Co., who behaved most kindly in reducing their freight charges. Should these consignments be successful, considerable results may be expected from them.

In July, 1867, Captain Grant, one of the Council of the Society, who was about to proceed on a visit to America, kindly offered to obtain and bring thence any birds or animals the Council might require, and the Council made a grant of £20

for this purpose. Amongst other most valuable importations, Captain GRANT endeavoured to bring over the Black Basse (*Centropristis atrarius*), which has not yet been introduced into England, though the attempt has frequently been made. The following extract from the report which Captain GRANT laid before the Council will explain in the most satisfactory manner the difficulties with which he had to contend and the cause of his non-success:

"Applying to Mr. HODGES, he informed me Mr. TISDALE of "East Wareham in Massachusetts, had the Black Basse in his "ponds, and had supplied a fishing club in the State of New "York with them. I now found this was the only gentleman, "at a short notice, I could obtain any fish from, and determined "to do my best to bring the Black Basse to Europe, and started "that afternoon for Wareham, although I had travelled the "whole of the previous night from Washington. I now tele-"graphed informing Mr. TISDALE I would be with him next "morning, and arriving at his residence informed him I was "desirous of obtaining twenty-five Black Basse, explaining to "him the objects of our Society. I inquired what value he set "upon his fish, and finding he had supplied clubs with them at 5 "dols. for each fish, I told him our Society was not a rich one, and "could not afford large sums for animals. He at once generously "gave the Society ten fish for nothing. On taking the water "out of the tank where the fish were confined, it was found a "musk rat had eaten a hole in the tank, and that the fish had "escaped with the exception of four large ones. Orders were "directly given to drag the ponds, and only four other fish "having been found, I started for New York with eight large "fish. Arriving at Newport, I found them all well, and placed "a small quantity of ice in the barrel. To my deep regret next "morning, on arriving at New York, I found them all dead."

Very fortunately, Captain GRANT was more successful with his other ventures, and succeeded in embarking on board the "Persia" on October 30th, 1867, the following consignment—

2 Mocking Birds
3 pairs of Wood Ducks
3 American Robins
4 Rice Birds
3 Wild Turkeys
1 pair Musquash,

Which by the kindness of Sir Edward Cunard, Bart., were transported free, and the whole of which were safely landed in England with the exception of one Wood Duck.

The Council have much pleasure in announcing the arrival from the Acclimatisation Society of Queensland of the following—

1 Black Cockatoo 7 Zebra Doves 1 Bennett's Kangaroo	Noticed as just arrived at the date of the last report.
1 White Cockatoo	
1 Nankin Crane	
11 King Parrots.	

Mr. W. Bennett, of Croydon, well known for his success in breeding the Emeu in this country, has most kindly presented the Society with a pair of Emeus and ten eggs, all of which are at present at Mr. Bush's, at Clapham.

A present of Eggs of the Oak-leaf eating Silkworm (*Bombyx Yama-mai*) has been received from Dr. Wallace, and the eggs and worms are on view at the island.

In reply to a communication from the Council, A. F. Bingham Wright, Esq., H.M. 9th Regiment, has kindly undertaken to obtain for the Society, living specimens of the Green and Copper Pheasants of Japan, and to bring them to England on board H.M.S. "Tamar," which is now conveying his Battalion to this country.

F. Porter, Esq., of Shanghae, has kindly offered assistance in obtaining the birds of Northern China, and the Council have sent him all instructions necessary to enable him to carry out his enterprising undertaking.

Letters have been received from Capt. W. E. Malcolm, R.E., now stationed at Quebec, asking for instructions as to the best mode of forwarding the Black Basse, which he is able to obtain, also stating that he hopes to be successful in getting the Long-tailed Duck (*Harelda glacialis*) from Anticosti, and the Harlequin Duck (*Histrionicus Torquatus*) from the north Shores of the Gulf of St. Lawrence. These instructions have been sent out as requested, and the Council hope that they may ere long be able to congratulate the members on the achievement of this which has hitherto presented insuperable difficulties.

The Council are happy to announce that their relations with the Zoological Society are of the most satisfactory nature, and that they receive therefrom the most valuable assistance, for which the Society cannot be too grateful.

The Collection of Birds in St. James's Park is steadily on the increase, and the evident appreciation by the public of the labours of the Society for their gratification, leaves nothing to be desired. It was found necessary in consequence of the disturbance caused to the breeding birds by the boats on the ornamental water, to petition H.M. Chief Commissioner of Works for the removal of the Boom which crosses the water above the island, to keep boats at a distance ; this petition was most liberally granted, and the Council hope that as the Boom now keeps boats 100 yards further off the island than before, the birds may be induced to breed with greater freedom, and that the losses from the carelessness of too eager amateur boatmen may be much lessened. A list of the birds in St. James's Park will be found further on. During the past year the Council have sent the following birds to the ornamental water in Battersea Park—

2 Black Swans
2 Barnacle Geese
2 Gargany Teal
4 Common Teal
2 pairs Widgeon
2 pairs Pintail Ducks
1 pair Buenos Ayres Ducks
2 pairs Carolina Ducks
1 Diver.

And to the Gardens of the Royal Horticultural Society

1 pair Carolina Ducks
1 pair Mandarin Ducks

The Council have to announce the completion of a small Fish Hatching Apparatus on the island in rear of the office, which is continually in operation, in order to afford Members the opportunity of seeing the process. Some hundreds of Salmon and Trout have already been hatched, and are now to be seen in their tank, and it is intended to hatch Perch, Carp, &c., as the season advances. This apparatus can always be inspected, as well as

the Society's Aviaries on the island, by members and their friends, on application to Mr. ALLEN, the Head Keeper.

The following list will show the breeding operations up to the present time, and the Council wish especially to direct the attention of the Members to the fact that the Pintail Ducks have not bred during the last fourteen seasons, and that the Wonga Wonga Pigeon and the Cereopsis Goose are but rarely bred in England.

Names.	Laid.	Hatched.	Remarks.
Black Swan	5	4	Two since dead.
Cereopsis Goose . .	5	0	This was during the cold weather.
Do. Do. . . .	4	3	One killed by a rat.
Bean Goose . . .	...	...	Sitting.
Do. Do.	...	...	Do.
Magellanic Goose . .	5	...	Do.
White-fronted Goose .	6	...	Do.
White Chinese Goose	...	4	
Do. Do. Do. .	...	...	Sitting.
Barnacle Goose . .	...	...	Laying.
Do. Do. . . .	...	...	Do.
Wild Turkeys (Canada)	26	...	Ten under Wild Turkey at Mr. Burr's; 16 under hens at Mr. Hambro's.
Buenos Ayres Duck .	...	...	Sitting.
Do. Do. Do. .	...	...	Do.
Do. Do. Do. .	...	...	Do.
Do. Do. Do. .	...	...	Do.
Pintail Duck . . .	8	...	Do.
Gadwall	6	...	Disposed of.
Silver Pheasants . .	..	...	Laying.
Gold Do. . . .	...	...	Do.
Half-bred Japanese Do.	...	...	Do.
Bankiva Jungle Fowl .	...	...	Do.
Wonga Wonga Pigeons	3		One they broke, one addled, one now under another pigeon.

The Council have undertaken the transmission of a number

of Insectivorous and Game Birds to Queensland at the request of the Acclimatisation Society of that colony, and hope that their efforts may be sufficiently successful to return in some small way the many gifts which have reached the parent Society from this most promising of its offspring.

Mr. Crawford, H.B.M. Consul at Oporto, having applied to the Society to aid him in stocking some of the rivers of Portugal with the fish of Great Britain, the Council have made arrangements for the transmission in proper season of the Ova and Fry of the various English Fish, and hope in their next report to be able to congratulate the members upon the success of this undertaking.

Letters having been received from Miss Burdett Coutts, requesting the aid of the Society in procuring for her some of the Breton Dwarf Sheep, to be introduced on to the island of Cape Clear, communications were opened with M. Geoffroi de St. Hilaire, director of the Société Imperiale d' Acclimatation at Paris, to ascertain the best mode of obtaining this peculiar breed of Sheep, and by his kind assistance the Council are enabled to obtain a small flock of Dwarf Sheep, from the shores of the Black Sea, with which Miss Coutts has expressed herself satisfied, and the Council are most happy to have had this opportunity of serving, even in so small a degree, a lady who has so very materially aided the objects of the Society, ever since its foundation. Concerning these sheep, M. de St. Hilaire writes as follows :—"The Russian Sheep are black, with a medium but not bad staple of wool. The fleece of the lambs is not at all inferior to that of the Astrakan lambs in curliness and brilliancy."

The Mouse Burr (*Martynia proboscidea*) or Devil's Toenails, brought from South America, by Mr. Higford Burr, has been most successfully cultivated during the past year, by Mr. Higford Burr, and Mr. Burford Hancock, both of which gentlemen report that the plant is most ornamental during its growth, flowering freely, with spikes of orange and black trumpet-shaped flowers, magnificent foliage, and ultimately yielding the very curious fruit from which it takes its name. Some few seeds of this curious plant are still in the hands of the Secretary for distribution to members.

In September last year the dies executed by Mr. ADAMS for the medal given to the Society by Miss BURDETT COUTTS, were presented to the Council by that lady personally, at Holly Lodge; and in April last, a gold medal, the first struck from the dies, was presented, at Marlborough House, to H. R. H. the President of the Society, who was graciously pleased to accept it, and to express his approbation of the design and execution.

The Council cannot refrain from again expressing their acknowledgments to Miss BURDETT COUTTS, for her uniform support of the Society, and for thus enabling the Council to recognise the services of those who may render valuable aid to the cause of Acclimatisation.

The Council have received a letter of thanks from the Royal College of Surgeons, for the body of an Emeu, which strangled itself in a gate.

It has been resolved by the Council that the thanks of the Society be offered to

Her Majesty the Queen.
The Zoological Society of London.
The Acclimatisation Society of Queensland.
The Peninsular and Oriental Steam Navigation Company.
Messrs. Smith, Fleming, & Co.
Messrs. Moore & Co.
Miss Burdett Coutts.
Sir Edward Cunard, Bart.
Lieut. Marshall.
T. Cowley, Esq.
M. Geoffroi de St. Hilaire.
W. Bennett, Esq.
Dr. Wallace.
— Tisdale, Esq.
Captain Grant.

for their valuable assistance rendered to the Society.

The following Birds, &c., have been purchased by the Council during the past year—

1 pair Ruddy Sheldrake
1 pair Rufous Tinamous

1 Versicolor Pheasant
3 pairs White Pea Fowl } For India.
8 pairs White Pigeons }
1 pair White Guinea Fowl
1 pair Mandarin Ducks
2 Mocking Birds
3 pairs Wood Ducks
3 American Robins
4 Rice Birds
3 Wild Turkeys
1 pair Musquash
Several Small British Birds in Aviary.

The following Birds, &c., have been disposed of by the Council during the past year—

1 Little Bustard
2 Black Francolins
1 Bronze-winged Pigeon
1 Black Cockatoo
4 Sonnerat Jungle Fowl
1 Bennett's Kangaroo
1 pair Musquash
5 pair Sandgrouse
1 pair Egyptian Geese
2 Common Geese
2 pair Black Swans
4 Buenos Ayres Ducks
2 Hybrid Ducks
8 dozen Japanese Silkworms
2 sittings cross-bred Japanese Pheasants' Eggs
2 sittings Pochard Eggs
20 Common Ducks
7 Zebra Doves
1 pair Wood Ducks
1 Mocking Bird.

The following surplus stock is now ready for disposal to the Members of the Society—

	£	s.	d.
1 Male Purple Crested Kaleege . . .	2	0	0
1 Male Fireback Pheasant . . .	15	0	0

		£	s	d.
Several Pairs Bankiva Jungle Fowl	per pair	0	15	0
1 Pair White Guinea Fowls		1	0	0
1 Nankeen Crane				
1 Pair White Swans		2	0	0
Several White Chinese Geese	per pair	1	10	0
Several Buenos Ayres Ducks	„	0	10	0
1 White Cockatoo (a very fine bird)		2	10	0
12 King Parrots	each	2	0	0
3 Rice Birds (good songsters)	„	0	10	0
2 American Robins (good songsters)	„	1	0	0
Oak-leaf Eating Silkworms	per doz.			
Japanese Silkworms	„	0	2	0
Common Silkworms	„			

The above may be viewed on application to the Head Keeper at the island. 25 per cent. discount off the above prices is allowed to Members.

The Secretary has a small quantity of the following seeds for distribution gratis to Members applying for them—

Mouse Burr, *Martynia proboscidea* (S. America)
Sinapis Rugosa
Rat Tailed Radish, *Raphanus Caudatus* } India.
Prickly Bamboo, *Bambusa Spinosa*

LIST OF BIRDS ON THE LAKE, ST. JAMES'S PARK.
(EXCLUSIVE OF YOUNG).

4 Black Swans
4 White Swans
1 Magellanic Goose
4 Barnacle Geese
3 Brent Geese
2 Egyptian Geese
5 White Fronted Geese
4 Bean Geese
2 Brown Chinese Geese
6 White Chinese Geese
3 Hybrid Geese
10 Carolina Ducks
1 Mandarin Duck

6 Shieldrakes
2 Ruddy Shieldrakes
28 Pochards (Crosses, &c.)
12 Gadwalls
5 Shovellers
12 Widgeon
4 Teal
4 Gargany Teal
4 Golden Eye
6 Tufted Divers
8 Pintail
4 Hybrid Carolina Ducks
10 Buenos Ayres Ducks
6 White Call Ducks
2 German Tufted Ducks
2 Muscovy Ducks
10 Wild and Half-breeds.

REPORT OF FISH-HATCHING OPERATIONS.

GENTLEMEN,—I have much pleasure in submitting my report of the Fish Culture operations of the last season 1867-68.

It will be seen that I have distributed on the part of the Society, Great Lake Trout 13,750; Fera, 500; Salmon, 4,100; Trout, 11,900; making a total of fish distributed, viz., 30,250. Many of these I have received from the officers of the French Government at Huningue.

The thanks of the Society are due to the authorities at Huningue, for the assistance they have afforded to the Society's operations. I have made arrangements for a further distribution of ova of the Salmonidæ during the forthcoming season. Although the effects of turning young salmon down into salmon rivers can be with difficulty ascertained, still there can be no doubt that by means of artificial culture, a stock of common non-migratory trout may be much increased if proper care be given to the young fish when hatching out, and they be transferred to suitable and protected localities when the umbilical vesicle has become absorbed.

GOLD SCHLEY.

Mr. Higford Burr has had considerable success in the cultiva-

tion of this ornamental fish in his ponds at Aldermaston. Although they did not breed so freely this last year, still those of last year's stock (some thirty or forty fish) have increased considerably in size. Mr. Burr attributes the non-presence of the smaller stock of fish to herons. I have received specimens of these Gold Schley, which are now in the ponds at the Royal Horticultural Gardens, South Kensington. I have also sent living specimens to Sir George Beaumont; they were exceedingly handsome well-grown fish. The male is distinguished from the female by having larger fins.

The Thunder Fish placed in Mr. Burr's ponds have also grown considerably, but they have not bred, as far as can be ascertained.

Oysters from North America.

I have received from the Hon. John Rose, of Montreal, living specimens of Canadian oysters, viz., Caraquette, Bouchetouche and Shrewsbury. They are exceedingly peculiar white shelled oysters, and I trust likely to breed in this country at a lower temperature of water than the English natives. With this idea I have placed the American oysters in my private experimental oyster fishery at Reculvers, near Herne Bay, Kent, and trust to be able to report results next year. They have already begun to grow their new summer shell.

FRANK BUCKLAND,
Inspector of Salmon Fisheries.

May 26, 1868.

EDWD. CHAS. RYLEY, *Sec.*

ATTENDANCES OF MEMBERS OF COUNCIL FOR THE YEAR ENDING MAY, 1868.

Bush, J., Esq.	14
Buckland, F. T., Esq.	3
Chester, Harry, Esq.	1
Crichton, A. W., Esq.	0
Gillbanks, Jackson, Esq.	2
Grant, Captain	7
Hambro, Charles, Esq.	5
Hancock, H. J. Burford, Esq.	10
Hawkins, B. W., Esq.	3
Kaye, J., Esq.	0
Lord, J. K., Esq.	1
Morgan, W. V., Esq.	5
Page, Rev. Cyril	9
Scovell, G. Esq.	7
Sturt, Lieutenant-Colonel Napier	1
Tredegar, Lord	2

LIFE MEMBERS.

* Vice-Presidents. † Members of Council.

Abinger, Lord, Abinger Hall, Dorking, Surrey.
Argyll, Duke of, Campden Hill, Kensington, W.; Inverary, Argyllshire.
Arkwright, John H., Esq., Hampton Court, Leominster.
Baker, W. R., Esq., Bayfordbury, Herts.
Baker, S. W., Esq., Hanson and Co., Constantinople.
Barton, John Hope, Esq., Stapleton Park, Pontefract.
Basset, John Francis, Esq., Tehidy Park, Roskrow, Cornwall.
Boston, Lord, 4, Belgrave Square, S.W.
†Brodie, Walter, Esq., 13, Delamere-terrace, Hyde-park, W.
Browning, Henry, Esq., F.R.G.S., 72, Grosvenor-street, Grosvenor-square, W.
Brownlow, Lord, Ashridge, Great Berkhamstead.
*Buccleuch, The Duke of, Montague House, Whitehall, S.W.; Broughton House, near Kettering.
Buchanan, Colonel, Drumpellier, N.B.
*Burr, Higford, Esq., 23, Eaton-place, S.W.; Aldermaston Park, Reading.
Burrell, Sir Percy, Bart., M.P., Kneep Castle, Horsham, Sussex.
Buxton, Sir Robert, Bart., Shadwell Court, Thetford.
Calthorpe, The Hon. F.H.N.G., M.P., 33, Grosvenor-square, W.
Chamberlayne, Thomas, Esq., Cranbury Park, Winchester.
Chantrey, Lady, Claridge's Hotel, Brook-street, W.
Clermont, Lord, 44, Brook-street, W.; Ravensdale Park, Newry, Ireland.
Cockburn, N., Esq., 60, Mark Lane.
Cooper, Sir Daniel, Bart., 20, Prince's-gardens, W.
Coutts, Miss Burdett, Holly Lodge, Highgate, N.
Craven, The Earl of, Combe Abbey, Coventry; Hampstead and Ashdown Parks, Lambourne, Berks.
Crawford, J. A., Esq., 15, Theatre-road, Calcutta (Agents, Messrs. Crawford, Colvin and Co., 71, Old Broad-street, E.C.)

Cubitt, G. Esq., Denbies, Dorking.
*Damer, Capt. S. Dawson, 2, Chapel-street, Grosvenor-square, S.W.
Dell, William, Esq., The Brewery, Castle-street, Long-acre, W.C.
Denison, Colonel Charles, Senior United Service Club, Pall-mall, S.W.
Denison, Alfred Esq., 6, Albemarle-street.
Eden, The Hon. William George, Doncaster.
Egerton (of Tatton), The Lord, 7, St. James's-square, S.W.; Tatton Park, Knutsford, Cheshire.
Elliott, John Bardoe Bowes, Esq., 26, Palmeira-square, Brighton.
Erskine, Miss, 29, Bryanstone-square, W.
Fenwick, Henry, Esq., M.P., Southill, Chester-le-street, Durham.
Fitzgerald, Gerald, Esq., Army and Navy Club, S.W.
Fleming, J. Esq., 26, Queen's-gate, W.
Fortescue, Earl, 17, Bruton-street, Berkeley-square, W.
Fortescue, The Hon. D. F., M.P., Hertford-street, May Fair, W.
*Gage, The Viscount, 4, Whitehall-yard, S.W.; Firle-place, Sussex.
Glyn, Sir Richard, Bart., Army and Navy Club, S.W.
†Grant, Capt. Fras. Wm., Army and Navy Club, S.W.; Monymusk, Aberdeen, N.B.
Gregson, Saml. Leigh, Esq., Toxteth Park, Liverpool.
Hall, A. W., Esq., Dunstew House, Deddington, Oxon.
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ACCLIMATISATION AND ORNITHOLOGICAL SOCIETY.

Balance Sheet for the Year Ending June 1st. 1868.

RECEIPTS.

	£	s.	d.
To Balance at the Bankers	54	2	3
„ Cash in hand	4	12	9
„ Life Subscriptions	31	10	0
„ Annual Subscriptions	180	12	0
„ Arrears of Subscriptions	72	9	0
„ Donations	85	10	6
„ Amount of Sales	87	8	0
„ Cash returned from P. and O. Company	15	0	0
„ Cash advanced by Messrs. Coutts and Co.	350	0	0
	£881	4	6

PAYMENTS.

	£	s.	d.
By Food and other expenses	68	15	4
„ Freight, &c.	70	12	0
„ Cages	20	13	0
„ Fish Culture	13	1	10
„ Purchase of Birds, &c.	24	16	0
„ Rent and Taxes	14	5	2
„ Salaries, &c.	70	4	0
„ Printing	18	8	0
„ Repairs	80	14	0
In Secretary's hands	1	0	2
By Balance at Bankers	498	15	0
	£881	4	6

I have this day examined the accounts and vouchers of the Acclimatisation and Ornithological Society, and I certify the same to be correct.

HENRY HANCOCK, *Auditor.*

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